FEDERAL ON-SCENE COORDINATOR'S REPORT

SNOW HILL LANE SITE
BROOKLYN, ANNE ARUNDEL COUNTY, MARYLAND

CERCLA REMOVAL ACTIVITY
FEBRUARY 5, 1991 THROUGH AUGUST 29, 1991

WALTER LEE
ON-SCENE COORDINATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III, PHILADELPHIA, PENNSYLVANIA

Snow Hill Lane Site
Federal On-Scene Coordinator's Report

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SITE:	Snow Hill Lane Site
SIZE:	Approximately 86 acres
LOCATION:	Brooklyn, Anne Arundel County, Maryland
APPROVAL DATE:	January 29, 1991
PROJECT DATES:	February 5, 1991 through completion, August 29, 1991
DESCRIPTION:	The Snow Hill Lane Site consisted of several surface piles of 55-gallon drums at different locations on the property. Several trails, which appeared to have been made by motorcycle traffic, were noted on the site. Several sampling investigations indicated significant levels of zinc (up to 13,000 parts per million), lead (up to 15,700 parts per million), and copper (up to 98,000 parts per million) in all of the soil samples analyzed. To mitigate the threats posed to human health and the environment, the OSC submitted a funding request for $1,949,131.
HAZARDOUS MATERIAL:	Metals, flammables, and PCBs.
QUANTITIES REMOVED:	322 drums of bulk material, 436 empty drums, three roll-offs of contaminated soil, and two roll-offs of PPE.
OSC:	Walter Lee
REMOVAL CONTRACTOR:	Guardian Environmental Services, Inc., Bear, Delaware
DISPOSAL LOCATION:	Cardinal Compliance, Maryland; APTUS Environmental Services; CNM Chemical Services; Clean Harbors of Baltimore, Maryland; Petro-Chem Processing, Inc., Michigan, WADCO of Maryland
PROJECT CEILING:	$ 1,949,131
ESTIMATED PROJECT COST:	$ 936,761
COMMENTS:	The overall success and cost savings to this project were greatly aided by the willingness of the City of Baltimore to assume responsibility for part of the cleanup as well as the innovative technology and analysis demonstrated by the XRF diffraction techniques.

Walter T. Lee

WALTER LEE, OSC
U.S. EPA - REGION III
PHILADELPHIA, PA

FOREWORD

The OSC, as mandated in Section 300.415 of the National Oil and Hazardous Substances Contingency Plan, March 1990 (NCP), is required to provide a coordinated federal response capability at the scene of a sudden discharge of oil or hazardous substance that poses an imminent and substantial threat to the public health and/or the environment. In addition, the provisions of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), promote a coordinated federal, state and local response to mitigate situations at hazardous waste sites which pose potential hazards to the public health and/or the environment.

The direct contact and ingestion threats posed to nearby residents by the spillage of hazardous material at the unsecured site necessitated an emergency response action to abate the threats. The provisions of the NCP and CERCLA were implemented by the U.S. Environmental Protection Agency, Region III, Philadelphia, Pennsylvania.

Walter J Lee

WALTER LEE
ON-SCENE COORDINATOR
U.S. EPA - REGION III
PHILADELPHIA, PA

I. INTRODUCTION

A. Initial Situation

The Maryland Waste Management Administration (MWMA) Enforcement Program files indicated that this site may have been operated as an unpermitted dump. The dump was apparently operated by Mr. Henry Siejack, who operated a number of similar dumps in the Baltimore area during the 1950s and 1960s. The property is currently owned by the DWC Trust Holding Company.

The Snow Hill Lane Site, which was formerly known as the Chertkof Property, was discovered by an MWMA inspector in February of 1982. A visual inspection of the site at that time revealed several surface piles of 55-gallon drums at different locations throughout the property. According to the inspector, most of the drums appeared to have been vandalized and were empty.

In August of 1983, a citizen's complaint was filed with MWMA in reference to finding drums near the Pennington Avenue Landfill, which is north of the Snow Hill Lane Site. As a result of this complaint, a follow-up investigation was done. Five groups of drums were found on the property. All of the drums were in various stages of deterioration and most were determined to be empty.

In February 1984, a visual assessment of the property was accomplished by the Maryland Department of Health and Mental Hygiene (DHMH) Office of Environmental Programs (OEP) to determine the number of drums on site and to pinpoint future sampling locations. Four areas containing varied numbers of drums were located on the property; an estimated total of 275 drums were discovered.

In June of 1984, a limited sampling was conducted of Cabin Branch (a creek located on the southern boundary of the site), for suspected contaminated soils and drums on the site. Analytical results indicated elevated concentrations of total lead, zinc, and chromium, with leachable toxic levels of lead and chromium in the soils as defined by the Extraction Procedure Toxicity (EP Tox) levels. The analytical results also indicated an elevated concentration of toluene in one drum. The sampling indicated that there were no volatile organics present in Cabin Branch.

On September 10, 1984, Site Complaint #SC-0-85-136 was issued to the DWC Trust Holding Company by the OEP, requiring the property owner to submit a plan to clean-up the site. The attorneys for the property owners and OEP negotiated several options to resolve the problems, but no final agreement was reached.

In March of 1985, MWMA Enforcement personnel were requested by the Anne Arundel County Fire Department to investigate two piles of drums that had been burned during brush fires at the rear of the Pennington Avenue Landfill. Preliminary observations of these drums indicated that they were new groups of drums dumped on the Snow Hill Lane Site.

On April 30, 1986, MWMA personnel again conducted a field inspection of this site. This time, the site was traversed from west to east. The west end of the property was characterized by the ruins of two small buildings and an earth berm covered with dense thickets and briars. Several paths that showed evidence of motorcycle and pedestrian traffic crossed the site and interconnected with each other both west to east and south to north.

Most of the drums observed during this on-site inspection were old and appeared to have been used for target practice, or opened and/or perforated by some other means. In some areas, colored chips and dried puddles of paint-like substances were observed on the ground adjacent to the drums. Samples from two areas where the drum contents appeared to have leaked onto the ground were collected by MWMA personnel. The analytical results were consistent with those of the June 1984 sampling episode. However, the analytical results also indicated the presence of polychlorinated biphenyls (PCBs).

In the southeastern section of the site, additional groups of drums were located on both sides of the access road and between it and Cabin Branch. One small surface area in this section showed evidence of scraping by earth-moving equipment, and the soils were slightly mounded with lids, rings, drum parts, and several crushed drums mixed throughout. Approximately 15 drums in this section had leaked their contents, a black substance that had hardened, onto the ground. A few of the drums in this section bore distinguishable names of large chemical manufacturers (e.g., Neville Chemical Co., Rohm and Haas Co., etc.).

In the northern section of the site, only two areas of drums were found. One group of approximately 20 to 30 drums that appeared to be empty, was located in heavy briars and underbrush. The burned drums observed on site in March of 1985 were also found during this inspection. No notable signs of buried waste, drums or other related materials were discovered during this inspection.

In April of 1987, the U.S. Environmental Protection Agency's (EPA's) Region III Remedial Branch Field Investigation Team (FIT III), from the NUS Corporation, performed a sampling assessment of the site.

On June 7, 1988, the EPA Technical Assistance Team contractor (Roy F. Weston, Inc.)(TAT) performed a windshield site assessment of the site. The drums previously reported to be on site were not visible due to restricted access on Cedar Hill Lane and the dense overgrowth of vegetation. Several trails, which appeared to have been made by motorcycle traffic, were noted on the site.

A windshield assessment was performed by EPA OSC Edward M. Powell in the winter of 1989. In February 1990, EPA OSC Phil Younis tasked TAT to draft an information package for review by the Agency for Toxic Substances and Disease Registry (ATSDR).

EPA Region III, OSCs Walter Lee and Glenn Lapsley, representatives from Maryland Department of the Environment (MDE) and TAT performed an assessment of the Snow Hill

Lane Site. Several hundred drums were observed in piles throughout the property. Composite samples were obtained from materials in each drum pile. The analytical results of the assessment revealed significant levels of PCBs, lead, cyanide, mercury and other RCRA-listed metals in the soil on site. There was unrestricted access to the site, and members of the public were observed walking through the site as well as "dirt biking" on site. In addition bullet holes were evident in many of the drums on site. The analytical results were submitted to ATSDR to determine whether an imminent threat to the public and the environment exists and what mitigative actions would be necessary to eliminate the potential hazard. On January 29, 1991, an Action Memorandum was signed by the Regional Administrator approving CERCLA funding. Activation occurred on February 5, 1991, with mobilization on February 11, 1991.

B. Site Location

The Snow Hill Lane Site is located on Snow Hill Lane in Brooklyn, Maryland, adjacent to Interstate Highway 695, which lies to the south of the site. Approximately ten residences are located within 200 yards of the site near the northwest boundary, and are topographically upgradient of the site.

C. Efforts to Obtain Cleanup by Potential Responsible Party(ies)

A unilateral order was issued to potentially responsible parties (PRPs) to take removal actions to mitigate the release or threat of release of hazardous substances from the site. The order, dated January 30, 1991, allowed the PRPs five business days to respond and they did not.

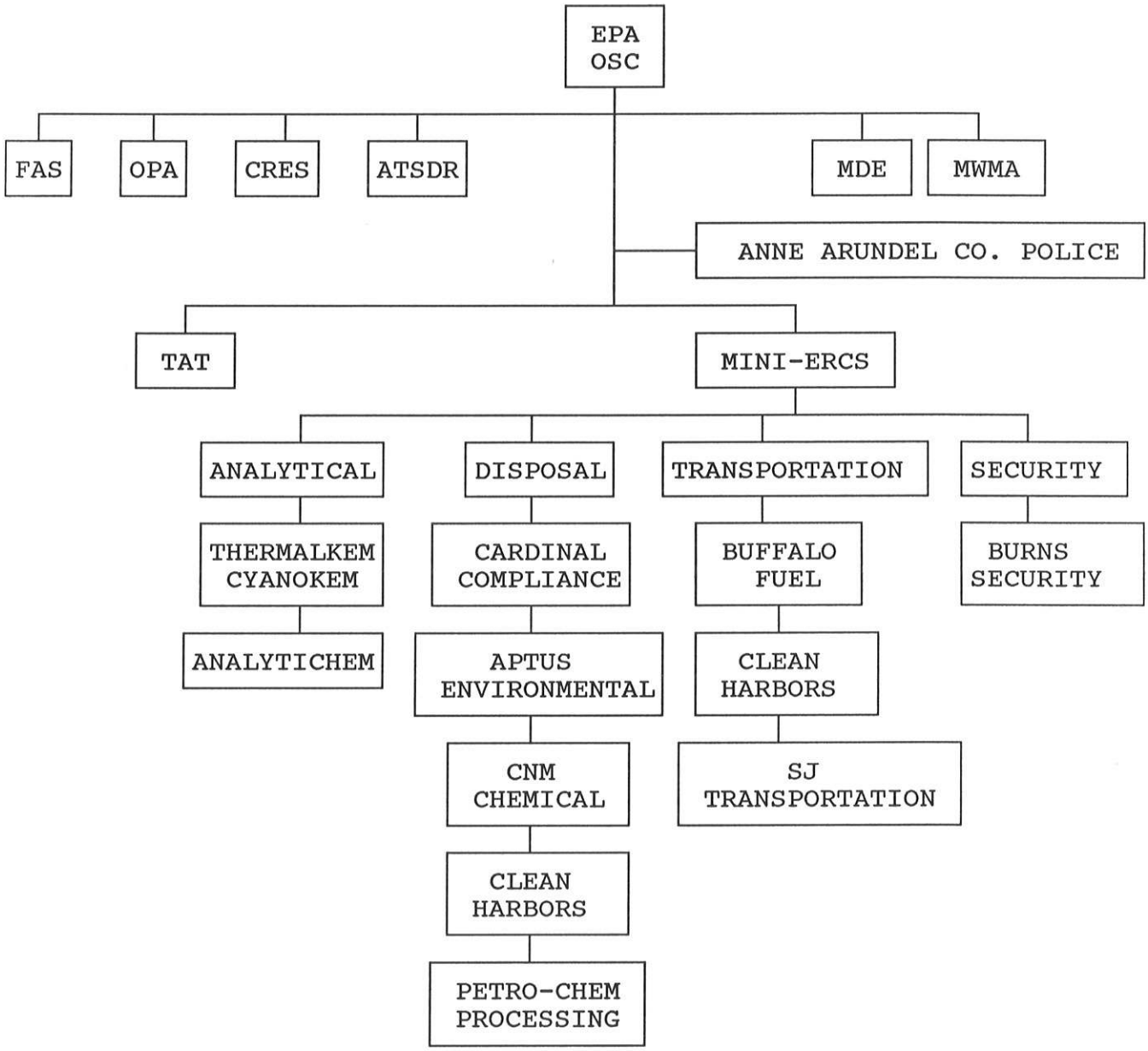
II. ROSTER OF AGENCIES, ORGANIZATIONS AND INDIVIDUALS

A. Name and Addresses

NAMES AND ADDRESSES	CONTACT	BRIEF DESCRIPTION OF DUTIES
U.S. EPA - Region III 841 Chestnut Building Philadelphia, PA 19107 (215) 597-9328	Walter Lee	Federal On-Scene Coordinator; responsible for the overall success of the project.
U.S. EPA - Region III 841 Chestnut Building Philadelphia, PA (215) 597-8250	George English	Federal On-Scene Coordinator; responsible for the project in Walter Lee's absence.
U.S. EPA - Region III 841 Chestnut Building Philadelphia, PA 19107 (215) 597-6684	Glen Lapsley	Conducted investigation for PRP.
U.S. EPA - Region III 841 Chestnut Building Philadelphia, PA 19107 (215) 597-9954	David A. Garrison	Assistant Regional Counsel who assisted OSC on legal issues.
U.S. EPA - Region III 841 Chestnut Building Philadelphia, PA 19107 (215) 597-6920	Leanne Nurse	Coordinated media relations for the OSC.
U.S. EPA - Region III 841 Chestnut Building Philadelphia, PA 19107 (215) 597-6920	Richard Messimer Linda Marzulli Joan Henry	Assisted OSC with cost tracking.
State of Maryland Department of the Environment 2500 Broening Highway Baltimore, MD 21224 (301) 631-3439	Mark Schappet Ronie Larmore	State representatives that assisted the OSC.
State of Maryland Department of the Environment 2500 Broening Highway Baltimore, MD 21224 (301) 631-3510	Emily L. Morse	State representative that advised the OSC on sediment control.
State of Maryland Department of the Environment 2500 Broening Highway Baltimore, MD 21224 (301) 631-3305	Karen Roof	Assisted the OSC in coordinating public relations.

NAMES AND ADDRESSES	CONTACT	BRIEF DESCRIPTION OF DUTIES
Department of Public Works 318 Mountain Road Pasadena, MD 21122 (301) 222-6141	Lawrence Pratt	Assisted OSC in removing guard rail.
Roy F. Weston, Inc. 5 Underwood Court Delran, NJ 08075 (609) 461-4003	(b) (4) [redacted]	Provided the OSC with technical assistance and managed the innovative technology of the XRF activities.
Guardian Environmental Services, Inc. 630 Chruchmans Road Suite 107 Newark, De 19702 (302) 834-1000	(b) (4) [redacted]	Mini-ERCS, prime contractor who provided personnel and equipment for removal/stabilization activities as stated on the Mini-ERCS contract.
Burns International Security Services 5438 York Road, Suite 201 Baltimore, MD 21212	(b) (4) [redacted]	Provided site security during the activation period.
Chemical Waste Management, Inc. 100 Nassau Park Blvd. Princeton, NJ 08540 (609) 243-7854	(b) (4) [redacted]	Provided the OSC with disposal options and disposal of several waste streams.
Clean Harbors 3363 Hollins Ferry Road Baltimore, MD 21227 (301) 247-6900	(b) (4) [redacted]	Arranged for the transportation and disposal facility.
Analytichem 28 Springdale Road Cherry Hill, NJ 08003 (609) 751-1122	(b) (4) [redacted]	Arranged for the transporter and disposal facility.
City of Baltimore Dept. of Public Works Bureau of Solid Waste 1000 Municipal 2000 North Holiday Street Baltimore, MD 21202 (301) 396-4512	Edward May, Jr. Vernon Fahey	Confirmed survey for the city of Baltimore.
U.S. EPA - Region III ATSDR Representative 841 Chestnut Building Philadelphia, PA 19107 (215) 597-7291	Charles Walters	Advised OSC regarding health concerns.

B. Organization of the Response



C. Glossary of Abbreviations

ATSDR	Agency for Toxic Substances and Disease Registry
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CGI	Combustible Gas Indicator (Explosimeter); measures combustible/explosive gas vapors
COB	Close of Business
CRES	EPA CERCLA Removal Enforcement Section
DWC	DWC Trust Holding Company

EPA	U.S. Environmental Protection Agency
ERCS	Refers to Mini-ERCS - Local Emergency Response Cleanup Services Contractor
FAO	EPA Field Administrative Officer
FAS	EPA Field Administrative Specialist
FIT	EPA Field Investigation Team
HAZCAT Kit	Portable chemical testing kit designed to provide immediate results in the field
HNU	Photoionization instrument, measures levels of certain organic vapors
Labpack	Bulking small containers into 55- or 85-gallon drums for disposal, secured from internal movement by use of vermiculite
MDE	Maryland Department of the Environment
MSDS	Material Safety Data Sheet
MWMA	Maryland Waste Management Administration
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NIOSH	National Institute of Occupational Safety and Health
NPL	National Priorities List
NUS	NUS Corporation, U.S. EPA FIT contractor
OPA	Oil Pollution Act of 1990
ORC	EPA Office of Regional Counsel
OSC	EPA On-Scene Coordinator
OVA	Organic Vapor Analyzer; measures levels of certain organic vapors
Overpack	Securing a deteriorated drum/container into an intact/larger 55- or 85-gallon drum for disposal
PCBs	Polychlorinated Biphenyls
POLREP	Pollution Report
PPE	Personal Protective Equipment
PPM	Parts per million; measurement for quantifying concentration level of contamination
PRP	Potential Responsible Party
QA/QC	Quality Assurance/Quality Control; means of ensuring accuracy
RCRA	Resource Conservation and Recovery Act
RM	ERCS Response Manager
RRC	Regional Response Center
SARA	Superfund Amendments and Reauthorization Act of 1986
TAT	Roy F. Weston, Inc., Technical Assistance Team, an EPA contractor
T & D	Transport and disposal
TCLP	Toxicity Characteristic Leaching Procedures
XRF	X-Ray Fluorescence Analyzer

III. NARRATIVE OF EVENTS

Based on the assessment performed in accordance with the National Contingency Plan (NCP), 40 CFR Part 300 on January 29, 1991, an Action Memorandum was signed by the Regional Administrator approving CERCLA funding. This was put into effect on February 5, 1991, due to the PRP's unwillingness to agree to the consent order.
The OSC activated an ERCS contractor on that date to supply personnel and equipment necessary to conduct cleanup of the site.

Initial removal activities included site reconnaissance, construction of an access road for personnel and equipment, and restriction with banner guard of unauthorized site access routes through Pennington Landfill. Trespassers were observed several times. OSC Lee informed them of the hazardous substances on site and encouraged them to remain off the property. Nevertheless, unauthorized site entry and vandalism continued and prompted OSC Lee to construct a perimeter fence around the site. U.S. EPA "No Trespassing, Hazardous Waste" signs were installed on the fence.

Drums containing hazardous substances were either overpacked or the contents were bulked with compatible substances and then overpacked and staged for disposal. RCRA-empty drums were also placed in the prepared drums staging area. Site reconnaissance efforst, in conjunction with an engineering survey for buried drums, indicated that no drums had been buried, so only drums at the surface had to be addressed. The numerous tires found on site were staged for disposal by the State of Maryland.

After the drums and tires had been staged, the XRF, calibrated to site-specific standards (See Appendix G for details) was used to categorized contaminated soil quickly. Soils that were found to be contaminated were excavated and put into roll-off boxes for disposal. Al hazardous substances were subsequently transported for final disposal.

On August 29, 1991, demobilization from the site occurred.

IV. RESOURCES COMMITTED

A. Initial Funding Request

Because the conditions met the criteria set forth in the NCP 40 CFR Section 300.415 (3/90) and CERCLA Section 104(b), as amended by SARA, Regional Administrator Edwin B. Erickson, pursuant to the Delegation of Authority 14-1-A, approved the funding request submitted by the OSC in the amount of $ 1,949,130 on January 21, 1991. A copy of the funding request can be found in Appendix A of this report.

B. Estimated Total Cost Summary

Extramural	
ERCS (Guardian)	$ (b) (4)
TAT	$
Extramural Subtotal	$
Intramural Subtotal	
EPA (Direct)	$
EPA (Indirect)	$
Intramural Subtotal	$
ESTIMATED TOTAL PROJECT COSTS	$

PROJECT CEILING $(b) (4)
% Project Ceiling Expended = 48.06%

V. EFFECTIVENESS OF THE REMOVAL

A. Activities of Various Agencies

1. Responsible Party(ies)

The PRPs negotiated with CRES throughout the project.

2. Federal Agencies and Special Forces

Walter Lee, serving as the Federal On-Scene Coordinator, directed all site activities and was responsible for the overall success of the project. The OSC closely coordinated with other EPA personnel, and with federal, state, county and local agencies, and directed the daily

activities of TAT personnel and the ERCS contractors. George English, Federal On-Scene Coordinator, directed overall activities in Walter Lee's absence.

The EPA CERCLA Removal Enforcement Section (CRES) was represented by Glen Lapsley, CRES On-Scene Coordinator, who headed the negotiations with the PRPs to enact cleanup of the site. However, a PRP takeover of the site of the CERCLA removal action could not be effected.

3. State and Local Agencies

The State of Maryland was represented by Ronie Larmore and Mark Schappet of the Maryland Department of the Environment. This agency monitored site activities to ensure that all actions taken were in compliance with state regulations and standards for hazardous substances. Their assistance was greatly appreciated by the OSC in the performance of these site activities. In addition, the state disposed of the tires that were hampering site activities.

4. Contractors

Personnel from the Roy F. Weston, Inc., Major Programs Division, Technical Assistance Team provided the OSC with investigative survey data, air monitoring, cost tracking and documentation, on-site contractor monitoring, on-site activities documentation, and site maps. TAT was also responsible for the XRF assessment, which enabled the contaminated sections of the site, as well as the degree of contamination, to be quickly characterized. The XRF allowed EPA to save thousands of dollars on analytical data and disposal costs.

Guardian Environmental was the Emergency Response Cleanup Services contractor responsible for supplying the personnel and equipment necessary for site set-up and stabilization, and hazardous waste removal.

B. Disposal Methods and Quantities Removed

The following table provides manifest information for materials that were disposed of from the Snow Hill Lane Site. Actual manifests are stored in the site file in the EPA Region III Central File Room, Philadelphia, PA.

MANIFEST NUMBER	DATE SENT	# OF DRUMS	CUBIC YARDS	MATERIAL	DISPOSAL	FACILITY EPA ID#	DATE RECEIVED	DISPOSAL METHOD
86087	05/23/91	32	-	HAZARDOUS WASTE SOLID, NOS	CLEAN HARBORS	MDD98055189	05/30/91	LANDFILL
86074	05/23/91	34	-	HAZARDOUS WASTE SOLID, NOS	CLEAN HARBORS	MDD98055189	05/30/91	LANDFILL
98066	05/23/91	29	-	HAZARDOUS WASTE SOLID, NOS	CLEAN HARBORS	MDD98055189	05/30/91	LANDFILL
98398	05/23/91	33	-	HAZARDOUS WASTE SOLID, NOS	CLEAN HARBORS	MDD98055189	05/30/91	LANDFILL
98188	05/23/91	24	-	HAZARDOUS WASTE SOLID, NOS	CLEAN HARBORS	MDD98055189	05/30/91	LANDFILL
98188	05/23/91	8	-	HAZARDOUS WASTE LIQUID, NOS	CLEAN HARBORS	MDD98055189	05/30/91	LANDFILL
98237	07/24/91	9	-	HAZARDOUS WASTE SOLID, NOS	CLEAN HARBORS	MDD98055189	07/24/91	LANDFILL
BL 56063	07/24/91	-	20	PPE TRASH AND DEBRIS	CLEAN HARBORS	MDD98055189	07/24/91	LANDFILL
98189	05/23/91	9	-	HAZARDOUS WASTE LIQUID, NOS	CLEAN HARBORS	MDD98055189	05/30/91	INCINERATION
98189	05/23/91	2	-	HAZARDOUS WASTE SOLID, NOS	CLEAN HARBORS	MDD98055189	05/30/91	LANDFILL
98396	05/23/91	32	-	HAZARDOUS WASTE SOLID, NOS	CLEAN HARBORS	MDD98055189	05/23/91	LANDFILL
98238	07/24/91	-	20	PPE TRASH AND DEBRIS	CLEAN HARBORS	MDD98055189	05/26/91	LANDFILL
71385	07/24/91	-	20	HAZARDOUS WASTE SOLID, NOS	CWM CHEMICAL SERVICES, INC.	NYD049836679	02/26/91	LANDFILL
56397	05/30/91	-	30	HAZARDOUS WASTE SOLID, NOS	CWM CHEMICAL SERVICES, INC.	NYD049836679	05/01/91	LANDFILL
56388	05/30/91	-	30	HAZARDOUS WASTE SOLID, NOS	CWM CHEMICAL SERVICES, INC.	NYD049836679	05/30/91	LANDFILL
82894	08/28/91	2	-	HAZARDOUS WASTE SOLID, NOS	APTUS ENVIRONMENTAL SERVICES	KSD981516025	09/07/91	INCINERATION
82892	08/28/91	46	-	WASTE FLAMMABLE LIQUID	PETRO-CHEM PROCESSING, INC.	MDD098061529	08/30/91	RE-USE/RECOVERY
82891	08/28/91	62	-	WASTE FLAMMABLE LIQUID	PETRO-CHEM PROCESSING, INC.	MDD098061529	08/31/91	RE-USE/RECOVERY
TOTALS		322	120					

MANIFEST NUMBER	DATE SENT	# OF DRUMS	CUBIC YARDS	MATERIAL	DISPOSAL	FACILITY EPA ID#	DATE RECEIVED	DISPOSAL METHOD
	03/25/91	217	-	EMPTY DRUMS NON-HAZARDOUS	CARDINAL COMPLIANCE	-	03/25/91	RE-USE/RECOVERY
	03/01/91	219		EMPTY DRUMS NON-HAZAROUS	WADCO	-	03/01/91	RE-USE/RECOVERY
	5/14/91	-	60	TIRES, NON-HAZARDOUS	BALTIMORE LANDFILL	-	05/04/91	LANDFILL
TOTALS		436	60					

VI. CHRONOLOGY OF EVENTS

This section provides a synopsis of events as they occurred at the Snow Hill Lane Site CERCLA Removal Action. The chronology is derived from POLREPs, photographic documentation, and site logs. As POLREPs are maintained in the EPA Region III RRC, they have not been included as part of this report. Copies of POLREPS may be obtained through the Freedom of Information Act.

July 16, 1990
A preliminary site assessment was performed by OSCs Lee and Lapsley, officials from the Maryland Department of the Environment and members of TAT. Assessment personnel observed several hundred drums scattered throughout the 83-acre site.

Analytical results of the assessment revealed significant levels of polychlorinated biphenyls, lead cyanide, mercury, and other RCRA-listed metals in the soil. To effectively characterize the potential threat to human health and environmental effects, an ATSDR data package was prepared.

January 29, 1991
A removal action memorandum was signed by the Regional Administrator to release CERCLA funds to mitigate the threat to human health.

January 30, 1991
A unilateral consent order, effective January 31, 1991, was issued to the PRPs to mitigate the threat of hazardous substances on site within five business days.

February 5, 1991
After PRPs unwillingness to agree to the consent order, the OSC activated ERCS to prepare for mobilization on February 11, 1991.

February 11, 1991
Office and decontamination trailers were placed on site. Site reconnaissance and restricting of access routes to the site through the Pennington Landfill with hazardous materials banner guard were performed. Five trespassers were observed on this date. The OSC informed two of the trespassers of the hazardous substances on site and encouraged them to remain off the property.

February 12, 1991
Site mobilization continued. Site reconnaissance and restricting of unauthorized access routes to site with snow fence and hazardous materials banner guard continued. An equipment access road into site was begun. One trespasser was observed on site.

February 13, 1991
Site mobilization continued. Site reconnaissance and restricting of unauthorized access routes continued. Preparation of equipment access road continued.

February 14, 1991
Mobilization to site was completed this date. An additional 30 drums were discovered during site reconnaissance. Preparation of site access road, decon shelter, and drum staging area continued. Samples were obtained from the north end of site to be used as standards to calibrate the XRF.

February 15, 1991
Decon shelter and site access road were completed this date. Work continued on the drum staging area. Additional site samples were prepared and sent for analysis for later use as standards for the XRF calibration procedures. MDE representatives were on site to observe site activities and offer assistance to the OSC.

February 16, 1991
The drum staging area was completed this date. A field laboratory for XRF analysis was prepared. Site reconnaissance efforts continued. Efforts to prevent unauthorized site entry continued.

February 18, 1991
Unauthorized site entry and vandalism continued to be a problem. The OSC began formulating options to address unauthorized site entries and reccurring vandalism. Site reconnaissance efforts continued in conjunction with an engineering survey for buried drums. XRF samples were screened in the field laboratory.

February 19, 1991
Site reconnaissance efforts continued in conjunction with the engineering survey for buried drums. XRF samples continued to be screened in the field laboratory. ERCS began placing RCRA-empty drums in the prepared drum staging area.

February 20, 1991
Site reconnaissance efforts continued in conjunction with the engineering survey for buried drums. A total of 105 drums were staged to date.

February 20, 1991 (continued)
Approximately 300 tires were staged on site. These tires hampered site activities and the State of Maryland tentatively agreed to dispose of the tires.

February 21, 1991
A total of 116 drums were staged to date. Tires continued to be staged on site. Soil samples were obtained for waste disposal analysis.

February 22, 1991
A total of 137 drums were recovered to date (16 were overpacked and 5 were bulked). Yellow viscous material found under drums contained high levels of heavy metals and PCBs.

February 23, 1991
A total of 150 drums were recovered to date (an additional 10 were overpacked and 3 were bulked). Because analytical data from previous samples failed the QA/QC review, additional soil samples were obtained and sent to be analyzed as site specific standards for the XRF.

February 25, 1991
The OSC determined that perimeter fencing was to be installed as soon as surveying for property boundaries was completed. Preliminary surveying indicated that approximately 50 drums were located on property owned by the City of Baltimore. A total of 167 drums were recovered to date (an additional 16 drums were overpacked and 1 was bulked).

February 26, 1991
A total of 204 drums were recovered to date (an additional 11 were overpacked and 13 were bulked).

February 27, 1991
A total of 232 drums were recovered to date (an additional 13 were overpacked and 15 were bulked).

February 28, 1991
A total of 301 drums were recovered to date (an additional 17 were bulked and 25 were overpacked).

March 1, 1991
A total of 336 drums were recovered to date (an additional 31 were overpacked and 4 were bulked). Two hundred nineteen (219) RCRA-empty drums were transported off site for disposal.

March 3, 1991
Routine maintenance was performed on site equipment. Site specific standards for the XRF were completed.

March 4, 1991
Overpacking of drums was postponed due to inclement weather conditions. Calibration of the XRF with site specific standards began on this date.

March 5, 1991
A total of 365 drums were recovered to date (an additional 28 were overpacked and 1 was bulked). Underground gas lines and property boundaries were located in preparation for fence installation.

March 6, 1991
A total of 387 drums were recovered to date (an additional 10 were overpacked and 10 were bulked). Perimeter fence installation began.

March 7, 1991
A total of 410 drums were recovered to date (an additional 13 were overpacked and 10 were bulked). Construction of perimeter fence continued.

March 8, 1991
A total of 437 drums were recovered to date (an additional 15 were overpacked and 11 were bulked).

March 9, 1991
A total of 447 drums were recovered to date (an additional eight were overpacked and 2 were bulked).

March 11, 1991
A total of 474 drums were recovered to date (an additional 19 were overpacked and 7 were bulked).

March 12, 1991
A total of 497 drums were recovered to date (an additional 19 were overpacked and 4 were bulked).

March 13, 1991
A total of 524 drums were recovered to date. The additional 27 drums were staged for bulking and overpacking. Six drums of hazardous substances were generated from the clean-up of gross contamination under drums on site. Samples were collected of a white viscous substance and a yellow powder found on site.

March 14, 1991
A total of 554 drums were recovered to date. The additional 30 drums were staged for bulking and overpacking. EPA Public Affairs Leanne Nurse arrived onsite and conducted a meeting with WBAL Channel 11 TV News.

March 15, 1991
In spite of poor weather conditions, 26 drums were staged for bulking and overpacking. A total of 580 drums were recovered to date. Installation of fence around the property continued. Baltimore Sun newspaper reporter Mr. Bugnaski arrived onsite.

March 17, 1991
Site security personnel informed TAT about site trespassing by a large truck and three bikers, who knocked down fence along dirt roads "2" and "4".

March 18, 1991
Fence along dirt roads "2" and "4" was repaired, and ERCS continued installing fence around the property. The OSC relayed site security concerns to ORC Garrison as six trespassers were found on DWC property this date. The OSC decided to delay the survey of the southeast side of the DWC property for fence installation since the boundaries there were poorly defined.

March 19, 1991
A total of 615 drums were recovered to date; 35 additional drums were staged for bulking and overpacking.

March 20, 1991
A total of 629 drums were recovered to date; 14 additional drums were staged for bulking and overpacking bringing the total number of overpacked drums to 318. Drum removal actions were completed this date. TAT performed heavy metals screening in areas "D" & "E" with the XRF.

March 21, 1991
TAT completed XRF pre-assessment screening in areas "D" & "E". ERCS continued construction of the fence around the property.

March 22, 1991
ERCS continued installation of the fence around the property.

March 23, 1991
Warning signs were installed on the fence. Due to poor weather conditions, site activities were suspended at early hours.

March 25, 1991
During a post-assessment for drums, four additional drums were found. One drum was empty, while the other three were overpacked and sampled for TCLP analysis.
One 20-cubic yard roll-off was filled with drums. Fence installation was completed.

March 26, 1991
ERCS completed securing the drum staging area and collecting tires. Personnel and equipment demobilized.

March 29, 1991
U.S. EPA "NO TRESPASSING HAZARDOUS WASTE" signs were installed throughout the site.

April 1, 1991
ERCS installed a lock box for the key for the security guard's punch clock. An unathorized vehicle was observed on site. Approximately 150 feet of fence, including gate "C", had been run down.

April 2, 1991
ERCS repaired the fence and the gate that were damaged on Monday, April 1, 1991.

April 4, 1991
During the night, the fence at gate "C" was again taken down. This time it was damaged beyond repair.

April 5, 1991
ERCS installed a new gate.

April 8, 1991
At the request of OSC Lee, TAT inspected the site and photodocumented the site conditions. Four newly burned patches in area "E" were observed. According to the site security log, during the afternoon of March 31, 1991, the fire was noticed. The local fire department was called and the fire was put out. Site security also reported the punch clock missing from the staging area.

April 22, 1991
At the request of OSC Lee, TAT again inspected and photodocumentated the site conditions. A section of the fence by area "F" was run over.

May 1, 1991
TAT surveyed the north side of Snow Hill Lane Site and confirmed the City of Baltimore report that DWC, PRP of the Snow Hill Lane Site, owns a 66-foot right of way through the Pennington Landfill. Thus, according to the City, EPA was to clean the 28 drums located on the strip of land. In addition, the City was to clean the 29 55-gallon steel drums, one 35-gallon poly drum, one cylinder, and several battery plates located on the landfill and BEDCO Development site, both city property.

May 3, 1991
OSC Lee was informed by the EPA Enforcement Section that the City should clean all the drums within the 66-foot strip because under CERCLA the City is a PRP for all the drums.

May 10, 1991
TAT performed a field screening, RCRA-compatibility test on the 29 55-gallon steel drums that the City of Baltimore will clean. In accordance with the field-screening tests, 15 drums were found to contain hazardous waste, while the other 14 were determined to contain inert solids.

A Mitsubishi four wheel-drive truck was found stuck in mud on the site. The vehicle had only 29,000 miles on it, but the windshield as well as the side doors were broken. The Anne Arundel County police were informed of the incident. According to the local police, the vehicle had not been reported stolen.

May 13, 1991
Personnel remobilized to the site for the transportation and disposal of abandoned tires, overpacked drums and roll-offs. However, OSC Lee was informed that Stout Environmental was out of compliance with RCRA. Thus, no drums could be disposed of with Stout Environmental as broker. ERCS loaded one roll-off of tires which was transported by Anne Arundel County to the Pennington Landfill. Under OSC request, TAT started performing a post-assessment XRF screening.

May 14, 1991
ERCS finished loading the tires, which were transported by Anne Arundel County to the Pennington Landfill (a total of three roll-offs). ERCS started segregating the drums on the staging area by waste streams.

The post-assessment XRF screening on area "D" was finalized. No major concentrations were found.

May 15, 1991
ERCS continued segregating the drums in the staging area by waste streams. TAT performed post-assessment XRF screening on area "E". High concentrations of chromium (2904 ppm) and lead (1428 ppm) were found in an area of 15 feet by 25 feet.

May 16, 1991
ERCS continued segregating the drums in the staging area by waste streams. The contaminated soil observed from area "E" during the post-assessment XRF screening was excavated and placed in a roll-off.

May 17, 1991
ERCS finished segregating the drums in the staging area by waste streams. The excavated soil was put in a roll-off, which was moved to the staging area. All personnel demobilized from the site.

May 22, 1991
Personnel mobilized to the site for disposal. Three trucks were scheduled for May 23, 1991.

May 23, 1991
Disposal of three truck loads occurred on site. The first truck left the site with 24 drums of inert solids and eight drums of base neutral liquids. The second truck left the site with 29 drums of organic solids. The third truck left the site with two drums of organic solids and nine drums of base-neutral (biphase). Personnel demobilized.

May 30, 1991
TAT and ERCS mobilized to the site to dispose of the soil. All the soil was in one roll-off, however the weight scale indicated that the roll-off was too heavy. OSC Lee obtained another roll-off and transferred some of the soil. After successfully transferring the soil, one roll-off departed the site. Personnel demobilized from the site.

July 24, 1991
TAT and ERCS mobilized to the site and continued disposal. Seven drums of the cyanide waste stream and two drums of the peroxide waste stream, one roll-off with contaminated soil and one roll-off with PPE departed the site. Personnel demobilized from the site.

August 28, 1991
The OSC, TAT, and ERCS mobilized to the site and continued disposal. Sixty-two drums of flammable solids, 46 drums of flammable liquids and 2 drums of PCB's departed the site. The MDE representative arrived at Snow Hill Lane Site and was updated on site activities.

August 29, 1991
Final demobilization from the site occurred.

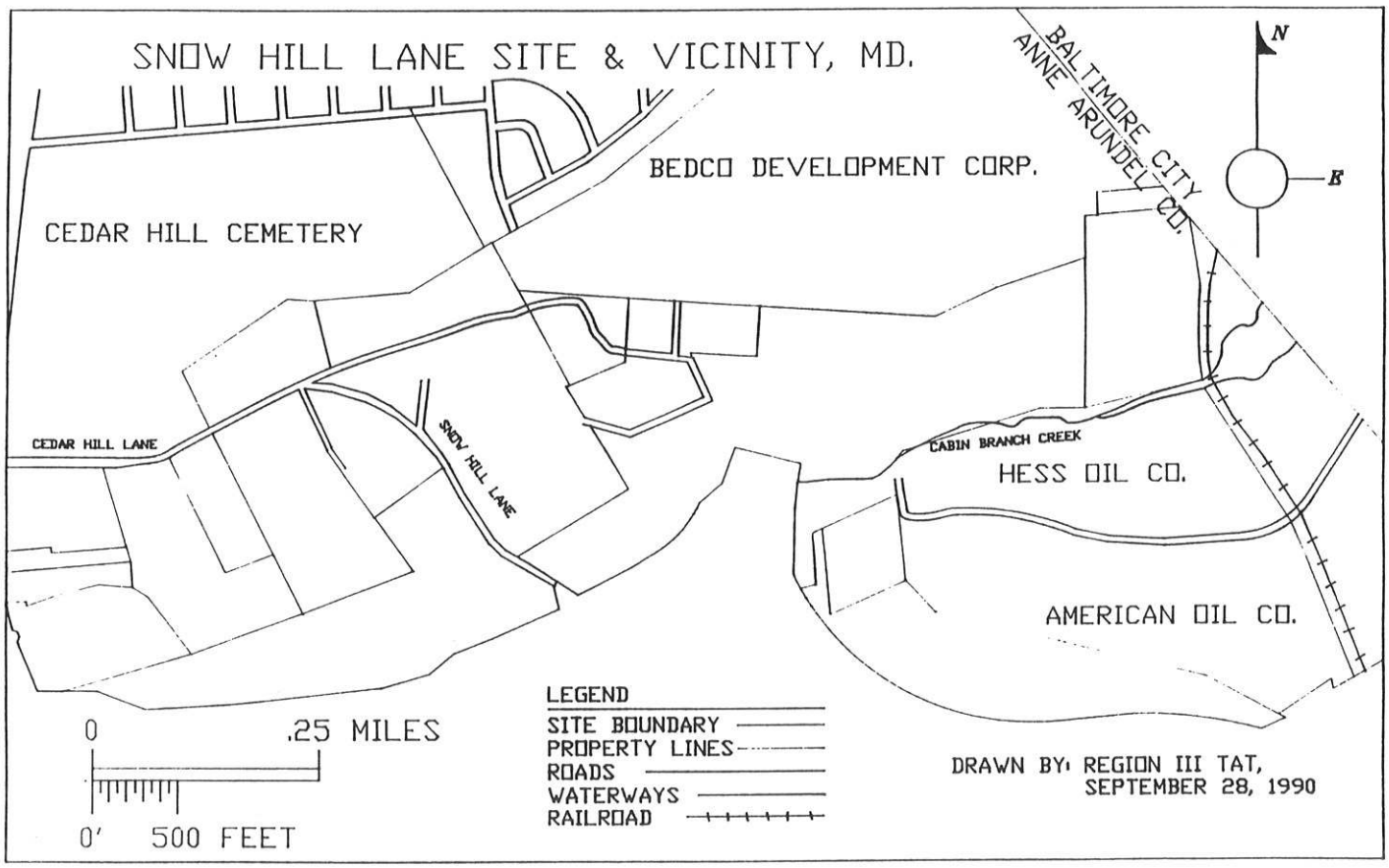
VII. PROBLEMS ENCOUNTERED AND RECOMMENDATIONS

Trespassing was one of the major problems encountered at the Snow Hill Lane Site. Daily, the OSC informed the trespassers of the hazardous materials present on site. Trespassers were observed on site numerous times, even after the OSC fenced in the 86 acres and posted U.S. EPA "NO TRESPASSING HAZARDOUS WASTE" signs every ten feet along the fence. In addition to the fence and the signs, site security personnel maintained a presence on the site during non-working hours. Despite the extent to which the OSC attempted to secure the site, trespassing and vandalism frequently occurred and often resulted in expenditures of funds to repair damages. In a situation such as this where people are heedless of the known threats to their personal safety, little can be done to protect them without rigid law enforcement, a resource which few municipalities can offer, or by establishing expensive upgrades of the site security work force, an often unanticipated re-allocation of project cleanup monies. In any case, thorough documentation of repeat offenders and security breeches in the site logbook may minimize the effects of a civil suit brought against the government for exposures/injuries sustained by known trespassers, who continued to tresspass after being informed about the nature of the site.

The other problem encountered at the Snow Hill Lane Site was the misunderstanding concerning the property boundaries between the FIT contractor and state authorities. While investigating the exact property boundaries which were needed for the fence installation, the OSC determined that the clean up of the waste drums was the responsibility of the City of Baltimore since the drums were located on the City's property. It is recommended that a survey team be utilized early at sites to determine precisely correct property boundaries in order to assure better cost recovery.

APPENDICES

A. LOCATION MAPS



B. AUTHORIZATION TO PROCEED/FUNDING DOCUMENTATION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

JAN 29 1991

SUBJECT: Request for Removal Action Approval
at the Snow Hill Lane Site
Brooklyn, Anne Arundel County, Maryland

FROM: Walter F. Lee, On-Scene Coordinator
Eastern Response Section (3HW31)

TO: Edwin B. Erickson
Regional Administrator (3RA00)

THRU: Abraham Ferdas, Acting Director
Office of Superfund (3HW02)

I. ISSUE

An assessment performed at the Snow Hill Lane Site in Brooklyn, Anne Arundel County, Maryland in accordance with the National Contingency Plan (NCP), 40 CFR Part 300, indicates that there is a threat to human health and the environment from exposure to chemicals. The On-Scene Coordinator (OSC) has determined that this site meets the conditions for initiating a Removal Action outlined in Section 300.415 of the NCP.

II. BACKGROUND

A. Site Description

The Snow Hill Lane Site consists of approximately 86 acres of completely unfenced, open flatland in a rural area of the City of Brooklyn, Anne Arundel County, Maryland. The site is bounded on the west by Mount Calvary Cemetery and Snow Hill Lane, on the north by Cedar Hill Lane and the Pennington Avenue Landfill, on the east by the Pennington Avenue Landfill and the Baltimore and Ohio Railroad, and on the south by Interstate Highway 695. Approximately ten residences are located within 200 yards of the site near the northwest boundary; they are topographically upgradient of the site.

The site currently has unrestricted access. On September 18 and 19, 1990, during a site reconnaissance, the Technical Assistance Team (TAT) under contract with the United States Environmental Protection Agency (EPA), observed a man walking his dog through the site within 30 feet of where drums were found. They also observed dirt-bike racing onsite. During earlier site visits, the OSC and TAT noted several trails that appear to have been made by bicycle or motorcycle traffic. They also noted apparent bullet holes in many of the drums. At present, the site is not listed on the National Priorities List (NPL), nor is it proposed for the list.

B. Quantities and Types of Substances Present

A visual inspection of the site by Maryland Waste Management Agency (MWMA) personnel in February 1982 revealed several surface piles of 55-gallon drums at different locations throughout the property. In February 1984, a state inspector estimated a total of 275 drums of unknown contents present in at least four different areas onsite.

A joint sampling assessment/investigation was performed at the site on July 18, 1990, by EPA and the Maryland Department of the Environment (MDE). Upon entry to the site, personnel observed several hundred drums of unknown contents in various piles scattered throughout the property. Composite samples were obtained from soil in each of the drum pile areas and the adjacent waterways.

Analytical results indicated significant levels of the hazardous substances zinc (up to 13,000 parts per million), lead (up to 15,700 parts per million), and copper (up to 98,000 parts per million) in all of the soil samples analyzed. Analysis additionally indicated toxic levels of leachable chromium and lead as defined by the Extraction Procedure Toxicity (EP Tox) analytical method.

Previous site sampling assessments/investigations performed by EPA and MWMA from 1982 to the present have revealed the presence of high concentrations of polychlorinated biphenyls (PCBs), chromium, lead, cyanide, zinc, and copper in the soil. Lead, zinc, copper, chromium, cyanide and PCBs are CERCLA hazardous substances as defined by Sections 101(14), and 102(a), and 40 CFR 302.4.

C. State and Local Authorities' Roles

Maryland Department of the Environment representatives have provided background information regarding the site and were present during the site visit on June 18, 1990. The OSC continues to coordinate site activities with State and local officials.

III. THREAT TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT

Conditions at the Snow Hill Lane Site pose an imminent and substantial threat to human health, welfare, and the environment. Section 300.415 of the National Contingency Plan lists the factors to be considered in determining the appropriateness of a removal action. Section 300.415, paragraphs (b)(2)(i), (iv), (v), and (vii) all directly apply to the situation which exists at the Snow Hill Lane Site.

Additionally, in a memorandum dated November 7, 1990, the Agency for Toxic Substances and Disease Registry concurred with the conclusion that there exists an imminent threat to the public health at this site. (See attached memorandum).

A) 300.415 (b)(2)(i) "Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants"

Dust from the site, containing the hazardous substances, lead, zinc, copper, chromium and PCBs present an inhalation and ingestion threat to nearby residents and to persons working in the vicinity of the Snow Hill Lane Site. Lead is a particularly hazardous metal, and exposure to it can cause mental retardation in children, anorexia, vomiting, malaise, and convulsions. PCBs and chromium are considered to be probable human carcinogens. Cyanide is a strong poison.

B) 300.415 (b)(2)(iv) "High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate"

Analytical results indicate that significant levels of leachable hazardous substance contamination exists in drum piles located onsite and in surface soil spread throughout the site that may migrate offsite.

C) 300.415 (b)(2)(v) "Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released"

The hundreds of drums of unknown materials located throughout the site are not protected from the weather, which increases the rate of deterioration of the containers. Normal rain events can carry contaminants from the site to surrounding areas.

D) 300.415 (b)(2)(vii) "The availability of other appropriate federal or state response mechanisms to respond to the release"

The Maryland Department of the Environment does not possess the resources to undertake a removal of this magnitude. MDE officials have requested that EPA respond to this incident.

IV. ENFORCEMENT

The EPA Removal Enforcement and Title III Section has been provided with all background information available to pursue any and all enforcement actions pertaining to the Snow Hill Lane Site. (See attached Confidential Enforcement Memorandum.)

V. PROPOSED ACTIONS AND COSTS

A. Proposed Actions

The proposed actions for the Snow Hill Lane Site are designed to eliminate the imminent threat to public health and the environment posed by the numerous potentially dangerous contaminants located on this property. The proposed four-phased action is as follows:

Phase One
1. Locate and retrieve all drums scattered throughout the property.
2. Remove spilled contaminated material from ground surfaces throughout the site.
3. Overpack and stage as necessary any materials identified as hazardous.

Phase Two
1. Obtain samples for segregation of materials into compatibility groupings.
2. Segregate all hazardous and non-hazardous materials.
3. Segregate and stage all materials into compatibility groupings.

Phase Three
1. Obtain samples of all overpacked, staged and segregated materials for disposal analysis.
2. Analyze samples for appropriate disposal analysis parameters.
3. Obtain disposal for contaminated materials at a RCRA-permitted disposal facility.

Phase Four
1. Transport all hazardous materials from the site to a RCRA-permitted facility for disposal.
2. Obtain confirmation of disposal of all materials.

At this time, it is estimated that the entire project will run less than the statutory 12-month time limit for removal actions, barring any unforeseen circumstances or disposal restrictions.

B. Estimated Costs

	Estimated Total Costs
Extramural Costs	
ERCS	$(b) (4) [redacted]
TAT	
Extramural Subtotal	
20% Contingency	
Total Extramural Costs	
Intramural Costs	
EPA (Direct)	
EPA (Indirect)	
Total Intramural Costs	
TOTAL PROJECT CEILING	$ [redacted]

VI. COMPLIANCE WITH ARARs

The proposed removal action set forth in this memorandum will comply with applicable, relevant and appropriate environmental and health requirements to the extent practicable considering the exigencies of the situation.

VII. RECOMMENDATION

Because conditions at the site meet the NCP Section 300.415 conditions for a removal, I recommend your approval of this proposed Removal Action. The estimated total project ceiling is $1,949,130, of which $1,866,490 is for extramural cleanup contractor costs. You may indicate your approval or disapproval by signing below. I recommend your approval to initiate response actions due to the nature of the threat described herein.

Approved: James V. McKenna / for Edwin B. Erickson Date: 1/25/91

Disapproved: _____ Date: _____

Attachment: Enforcement Confidential Memorandum

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Agency for Toxic Substances
and Disease Registry

Memorandum

Date November 7, 1990

From Environmental Health Scientist, Emergency Response and Consultation Branch (ERCB), Division of Health Assessment and Consultation (DHAC), ATSDR, (E32)

Subject Health Consultation: Snow Hill Lane Site
Brooklyn, Anne Arundel County, Maryland

To Charles J. Walters
Public Health Advisor
ATSDR Regional Services
EPA Region III
Through: Director, DHAC, ATSDR (E32)
Chief, ERCB, DHAC, ATSDR (E32) ERG

BACKGROUND AND STATEMENT OF ISSUES

The Agency for Toxic Substances and Disease Registry (ATSDR) received a request from the Environmental Protection Agency (EPA), Region III to review the data associated with the Snow Hill Lane Site (SHL), Brooklyn, Anne Arundel County, Maryland. The EPA requested ATSDR to determine if the site represents a human health threat.

The Snow Hill Lane Site consists of approximately 86 acres of flatlands. Most of the site is a wooded area with heavy brush. The site is used for recreational activities as evidenced by several trails, probably made by bicycle, motorcycle, or pedestrian traffic. The site is bounded on the west by Mount Calvary Cemetery and Snow Hill Lane, on the north by Cedar Hill Lane and the Pennington Avenue Landfill, on the east by the Pennington Avenue Landfill and the Baltimore and Ohio Railroad, and on the south by the Cabin Branch Creek. This stream varies in width, from 8 inches to 4 feet, and in depth, from several inches to 1 or 2 feet along the border of the site. Within 1 mile of the site, Cabin Branch Creek widens and empties into Curtis Creek and then eventually into the Patapsco River. The section of the Cabin Branch Creek adjacent to the site is probably not fished.

The site is completely unfenced and is adjacent to Interstate Highway 695 which lies to the south of the site. Approximately ten residences are located within 200 yards of the site near the northwest boundary and are topographically upgradient. File data indicate that two of the residences use private wells for potable and domestic water supplies, while the remainder of the residences use municipal water. The depth to groundwater varies from 10 to 30 feet. Reportedly, the groundwater flows east, toward the Patapsco River. Surface runoff from the site flows south into Cabin Branch Creek, a stream that flows along the southern boundary of the site.

The Snow Hill Lane Site was reportedly operated as an unpermitted dump during the 1950s and 1960s. It was discovered by a Maryland Waste Management Administration (MWMA) inspector in February 1982. Private citizens and the State of Maryland have expressed concern about the potential for adverse environmental impacts and health implications. Past site investigations (1982-1989) revealed the presence of polychlorinated biphenyls (PCBs), lead, and cyanide at levels in soil that were above the expected backgrounds for the area. Also scattered across the site are abandoned drums and tires. The drums are in various stages of disintegration and have apparently been used for target practice. There is some indication that there are buried drums on-site. These drums may still contain toxic materials. Some of the tires are still inflated.

On July 18, 1990, additional sampling and observations were performed at the site. Approximately 300 drums were observed, most (276) were 55-gallon steel drums. The remainder were 35-gallon fiberglass drums. As noted above, many of the drums were used for target practice. In many instances, the contents of the drums had seeped onto the ground. Some of the tires and the more intact drums appeared to contain standing water.

Areas of stressed vegetation were observed around several of the drum piles. An unvegetated area of about 100 square feet on-site might indicate the presence of buried drums or the presence of contaminants in the soil that prohibit the growth of vegetation. Composite samples from the contents of drums, soil, and the areas of drum seepage were obtained for analysis. Sample analyses indicated the presence of various contaminants.

The soils with the highest contamination were found to be associated with drum clusters located in the north central portion of the site. Total cyanide levels ranging from 2 parts per million (ppm) to 68 ppm were detected. Aroclor 1254, a PCB, was detected at levels ranging from 0.08 ppm to 250 ppm. Lead levels ranged from 70 ppm to 15,700 ppm. Mercury levels ranged from 0.12 ppm to 200 ppm.

A sample of soil obtained off-site at or near an industrial area was used to provide an indication of background levels. A lead concentration was reported as 730 ppm, a level which is probably above the natural soil level for the area.

Water samples were obtained from locations upstream and downstream in the Cabin Branch Creek and from one off-site, presumably upgradient, private residential well. At each of the sampled locations, 0.2 ppm of lead was detected. It is not clear if these samples were filtered or unfiltered or

why all of the samples had the same reported levels. Sediment samples were collected at the same locations as the upstream and downstream water sample locations. None of the metal levels detected in sediments was of public health concern.

DOCUMENTS AND INFORMATION REVIEWED

1. Memorandum from Walter F. Lee, OSC, Eastern Response Section, EPA, Region III, to Mr. Charles J. Walters, Public Health Advisor, ATSDR Region III, about Snow Hill Lane Site, Brooklyn, Anne Arundel County, Maryland, dated October 2, 1990.

2. Chronology of Events, Snow Hill Lane Site.

3. Site Location Map.

4. Tables I-IX, Sampling Results for MWMA, NUS, TAT.

5. Sampling Location Map for MWMA, NUS, TAT.

6. TAT July 1990 Trip Report.

7. CLP Basic Data Interpretation.

8. ATSDR, Toxicological Profile for Mercury, ATSDR/TP-89/16, December 1989.

9. ATSDR, Toxicological Profile for Cyanide, ATSDR/TP-88/12, December 1989.

10. ATSDR, Toxicological Profile for Lead, ATSDR/TP-88/17, June 1990.

DISCUSSION

Potential exposures to lead appear to be the most serious threat to health identified at the site. Feasible exposures to lead at the site include ingestion of contaminated groundwater and ingestion and inhalation of contaminated soils during recreational activities on-site. Maximum lead levels (15,700 ppm) in soil were found near clusters of drums. Although other toxic substances including cyanide, mercury, and PCBs were detected at elevated levels in soils, the levels at this site, with the exception of cyanide, do not appear to pose as serious a concern as that of lead. The maximum level of cyanide detected at the site was 68 ppm. Ingestion of several grams of this cyanide-containing soil within a short period of time (5-30 minutes) could represent an acute health concern, most notably amongst children with pica.

It has been suggested that repeated exposures via ingestion or inhalation to soils containing greater than 500 ppm of lead could lead to elevated blood lead levels and adverse health effects. Detected levels of lead at areas of this site are as high as 15,700 ppm. Preschool age children would be most vulnerable to the toxic effects of lead and are the most likely to ingest lead-contaminated soil through play or pica behavior. Toxic effects of lead include adverse effects on the central nervous system, behavioral changes, encephalopathy, kidney damage, and anemia. Evidence of frequent pedestrian traffic, and the close proximity of area residences, suggest that frequent contact with contaminated on-site soils can occur.

There is also the possibility that lead contamination exists off-site. A lead background level of 730 ppm was cited in the data package. While such levels could indicate lead enrichment as a result of vehicular traffic, the possibility exists that off-site migration of lead has occurred. The information provided was not sufficient to evaluate this possibility.

A lead level of 0.2 ppm was reportedly detected in water obtained from one residential well. This level is above EPA's Proposed Maximum Contaminant Level of 0.005 ppm for potable water. Assuming the level of lead detected in the well water is an accurate representation of the water quality, consumption of the water poses a health concern to young children and adults alike. Developing fetuses may be at special risk. Use of the water for bathing or other non-potable purposes probably presents little or no health hazard. However, the fact that the water samples obtained during the last sampling round reportedly contained the same concentration of lead, regardless of location and type (surface water or groundwater) of water sampled, suggests that some methodological problem may have been present.

The conditions at the site pose other health concerns not necessarily related to toxic chemical exposures. Standing water accumulating in the drums and tires which are on-site can provide breeding grounds for insects that harbor diseases. Buried drums, if present, may continue to leak their contents and further affect the environment.

Physical hazards are also present on-site. Deteriorating drums could cause serious wounds due to sharp edges. Tetanus and other infections are always a concern when such wounds occur. The tires could also present a hazard if they are set on fire. Smoke from burning tires contains toxic fumes that could be hazardous, particularly to individuals that have respiratory illnesses. Individuals may be affected by the irritating effects of the smoke. Also, during fires, tires which have remained inflated may explode. An explosion could project the rim and pieces of rubber at high rates of speed, creating a situation where direct injuries and death could occur.

Page 5 - Charles J. Walters

CONCLUSIONS

Based on the information presented, ATSDR concludes that the site represents a potential public health threat.

RECOMMENDATIONS

1. Restrict access to the site.

2. Determine the presence of buried drums or other wastes.

3. Resample water of off-site private well that was previously sampled. If water quality is not potable, provide alternate potable water supply for consumption.

4. Determine the use of the private wells in the area and monitor water quality. If necessary, provide alternate potable water supply for consumption to all households found to have nonpotable water in wells, if well water is used for consumption.

5. Determine if off-site migration of contaminants has occurred or is occurring.

If additional information becomes available, or you desire further clarification, please do not hesitate to contact us.

Martha Dee Kent

Martha Dee Kent

C. ADMINISTRATIVE ORDER TO RESPONSIBLE PARTY(IES)

BEFORE THE
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III

IN THE MATTER OF:	:	
Snow Hill Lane Site	:	Docket No. III-91-23-DC
DWC Trust Holding Company	:	
Helen Gimbel, Co-Trustee, DWC Gimbel Family Branch Trust	:	
Stephanie Prince, Co-Trustee, DWC Gimbel Family Branch Trust	:	
Ethel Posnick, Co-Trustee, DWC Posnick Family Branch Trust	:	
Helene K. Miller, Co-Trustee, DWC Posnick Family Branch Trust	:	
Benjamin Clayten, Co-Trustee, DWC Clayten Family Branch Trust	:	
Martha Lee Fendler, Co-Trustee, DWC Clayten Family Branch Trust	:	
Howard L. Chertkof	:	
E. Robert Chertkof	:	
RESPONDENTS	:	
Proceeding Under Section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. § 9606)	:	

I hereby certify that the within is a true and correct copy of the original UAO filed in this matter.

Attorney for

ADMINISTRATIVE ORDER
FOR REMOVAL RESPONSE ACTIVITIES

Having determined the necessity for implementation of response activities at or relating to the Snow Hill Lane Site in Brooklyn, Anne Arundel County, Maryland, the United States Environmental Protection Agency ("EPA"), hereby Orders as follows:

Snow Hill Lane Site Docket No. III-91-23-DC

I. JURISDICTION

1.1 This Order is issued pursuant to the authority vested in the President of the United States by Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. §§9606, ("CERCLA"), delegated to the EPA by Executive Order No. 12,580, 52 Fed. Reg. 1923 (1987), and further delegated to the Regional Administrators of EPA. This Order pertains to property located at the termination of Snow Hill Lane, Brooklyn, Anne Arundel County, Maryland. The property will hereinafter be referred to as the "Snow Hill Lane Site" or "the Site", and is further described in paragraph 3.7 below.

1.2 The Respondents shall undertake all actions required by the terms and conditions of this Order. The actions taken pursuant to this Order shall be consistent with the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300, as amended, ("NCP") and CERCLA.

1.3 This Order is issued to the above captioned Respondents ("Respondents").

II. STATEMENT OF PURPOSE

2.1 In issuing this Order, the objective of EPA is to protect the public health and welfare and the environment by ensuring that a proper removal response action, as defined in Section 101(23) of CERCLA, 42 U.S.C. §9601(23), is conducted to abate, mitigate and/or eliminate the release or threat of release of hazardous substances at the Site, as hereinafter described, and to properly dispose of and/or treat hazardous substances located there.

III. FINDINGS OF FACT

3.1 Respondent DWC Trust Holding Company ("DWC Co.") is incorporated in the State of Maryland.

3.2 Respondents Helen Gimbel and Stephanie Prince are Co-Trustees for the DWC Gimbel Family Branch Trust.

3.3 Respondents Ethel Posnick and Helene K. Miller are Co-Trustees for the DWC Posnick Family Trust.

3.4 Respondents Benjamin Clayten and Martha Lee Fendler are Co-Trustees for the Clayten Family Trust.

3.5 Respondents Howard L. Chertkof and E. Robert Chertkof are individuals.

3.6 Respondents are current owners of the Site, and have been owners since 1982.

3.7 The Site is located at the termination of Snow Hill Lane, Brooklyn, Anne Arundel County, Maryland. Currently, the Site is in an abandoned state with no apparent operations occurring. The Site is approximately 86 acres with a dense stand of vegetation. The Site is completely unfenced, open flatland in a rural area. It is bordered along a short stretch on the south by a small stream known as the Cabin Branch, and bounded on the west by Mount Calvary Cemetery and Snow Hill Lane. On the north it is bounded by Cedar Hill Lane and the Pennington Avenue Landfill. The Baltimore and Ohio Railroad bounds the Site on the east, while Interstate Highway 695 bounds the Site on the south.

3.8 In February of 1982, a Maryland Waste Management Administration ("MWMA") inspector observed several surface piles of 55-gallon drums at different locations throughout the Site.

3.9 On September 10, 1984, the State of Maryland issued a Site Complaint to DWC Co. requesting cleanup of the Site. The cleanup was never conducted.

3.10 In April of 1986, MWMA personnel observed evidence of earth moving activities at the southeastern section of the Site. The soils were slightly mounded with lids, rings, drum parts, and several crushed drums mixed throughout. Approximately 15 drums had leaked their contents (a black substance which had hardened) onto the ground.

3.11 Due to unrestricted access, individuals have been observed transitting the Site by foot. There is evidence that the Site is heavily used by bicycle and/or motorcycle traffic. In addition, bullet holes are evident on several of the drums on the Site.

3.12 On July 16, 1990, EPA Region III On-Scene Coordinators Walter Lee and Glen Lapsley, along with members of EPA Region III's Technical Assistance Team (TAT) and the Maryland Department of the Environment, performed an assessment of the Site. Several hundred drums, some of which were later found to contain hazardous substances, were observed in piles throughout the property. Composite samples were obtained from soil in each of the drum pile areas and the adjacent Cabin Branch.

3.13 Analytical results of the samples taken during a July 18, 1990 investigation revealed the presence of chromium, copper,

cyanide, lead, and zinc at significant levels in all of the soil samples analyzed. In addition, subsequent samples taken from select drums at the Site on November 9, 1990 showed the presence of chromium, copper, lead, zinc, and cyanide.

3.14 Previous site sampling/investigations performed by EPA and the Maryland Department of the Environment on April 7, 1987 also revealed the presence of polychlorinated biphenyls ("PCBs"), chromium, lead, cyanide, zinc, and copper in the soil.

3.15 Human exposure to the above hazardous substances identified may occur from personal direct contact with the released material. Contaminated dust from the Site presents an inhalation and ingestion threat to nearby residents and to people working in the vicinity of the Site. The hundreds of drums located throughout the Site are not protected from the weather, which increases the rate of deterioration of the containers. Normal rain events can carry contaminants from the Site to surrounding areas.

3.16 Chromium is a human poison by ingestion with gastrointestinal effects.

3.17 Copper has human systemic effects by ingestion, which are nausea and vomiting.

3.18 Cyanide is very poisonous to humans by most routes.

3.19 Lead is poisonous to humans by ingestion and moderately toxic by intraperitoneal route. It is a suspected carcinogen of the lungs and kidneys. Human systemic effects by ingestion and inhalation are loss of appetite, anemia, malaise, insomnia, headache, irritability, muscle and joint pains, tremors, hallucinations, distorted perceptions, muscle weakness, gastritis, and liver changes. It also affects the human nervous system, the blood system, and the kidneys. Chronic exposure can lead to irreversible vascular sclerosis, tubular cell atrophy, interstitial fibrosis, and glomerular sclerosis. Severe toxicity can cause sterility, abortion, and neonatal mortality and morbidity.

3.20 PCBs are moderately toxic to humans by ingestion and are suspected carcinogens.

3.21 Zinc has human systemic effects by ingestion, which are coughing, dyspnea, and sweating. It is also a human skin irritant.

3.22 Chromium, copper, cyanide, lead, PCBs, and zinc are hazardous substances within the meaning of Section 101(14) of CERCLA because they are listed at 40 C.F.R. §302.4.

IV. CONCLUSIONS OF LAW

4.1 The Snow Hill Lane Site is a facility as defined by Section 101(9) of CERCLA, 42 U.S.C. §9601(9).

4.2 The Respondents are persons as defined by Section 101(21) of CERCLA, 42 U.S.C. §9601(21).

4.3 Hazardous substances, as defined in Section 101(14) of CERCLA, 42 U.S.C. §9601(14), have been disposed of at the Snow Hill Lane Site and are currently present there.

4.4 The presence of hazardous substances at the Site and the potential migration of hazardous substances from the Site constitutes an actual and/or threatened "release" as defined in Section 101(22) of CERCLA, 42 U.S.C. §9601(22).

4.5 Respondents are the owners of the Site, within the meaning set forth in Section 101(20) of CERCLA, 42 U.S.C. §9601(20).

4.6 Respondents are liable under Section 107(a) of CERCLA, 42 U.S.C. §9607(a). Respondents are jointly and severally liable for carrying out the provisions of this Order.

V. DETERMINATIONS

Based on the Findings of Fact and Conclusions of Law set forth above, and the Administrative Record supporting the issuance of this Order, EPA has determined that:

5.1 The actual and/or threatened release of hazardous substances from the Site may present an imminent and substantial endangerment to the public health or welfare or the environment.

5.2 The actions required by this Order are necessary to protect the public health and welfare and the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. §9606(a).

5.3 Because there is a threat or potential threat to public health or welfare or the environment, a removal action is appropriate to abate, minimize, stabilize, mitigate or eliminate the release or threat of release of hazardous substances at or from the Site.

VI. PARTIES BOUND

6.1 This Order shall apply to and be binding upon Respondents, their agents, successors, and assigns and upon all persons, contractors and consultants acting under or for the Respondents, or persons acting in concert with Respondents who have actual knowledge of this Order or any combination thereof. No change in ownership or corporate or partnership status will in any way alter the status of the Respondents or their responsibilities under this Order.

6.2 No change in ownership of any property covered by this Order shall in any way alter, diminish, or otherwise affect Respondents' obligations and responsibilities under this Order.

6.3 In the event of any change in ownership or control of the Site, any Respondent(s) who are owners and/or operators of the Site shall notify the EPA in writing at least thirty (30) days in advance of such change and shall provide a copy of this Order to the transferee-in-interest of the Site, prior to any agreement for transfer.

6.4 The Respondents shall provide a copy of this Order to all contractors, subcontractors, laboratories and consultants retained to conduct or monitor any portion of the work performed pursuant to this Order, and shall condition all such contracts on compliance with the terms and conditions of this Order.

6.5 Respondents are jointly and severally liable for compliance with the provisions of this Order. All references to "Respondents" herein shall mean all Respondents, both collectively and individually. The failure by one or more of the Respondents to comply with all or any part of this Order shall not in any way excuse or justify noncompliance by any other Respondent. Further, the compliance by one or more Respondents with all or part of this Order shall not in any way excuse or justify non-compliance by any other Respondent.

VII. NOTICE TO THE STATE

7.1 Notice of issuance of this Order has been given to the State of Maryland, pursuant to Section 106(a) of CERCLA, 42 U.S.C. §9606(a).

VIII. WORK TO BE PERFORMED

8.1 Pursuant to Section 106(a) of CERCLA, 42 U.S.C. §9606(a), Respondents are ordered to commence and complete performance of the following removal action ("the Work" or "Work") within the time periods specified.

8.2 Within five (5) business days of the effective date of this Order, Respondents shall retain a qualified contractor to conduct the Work identified in this Order and notify EPA in writing of the identity and qualifications of the contractor. Prior to the initiation of Work, Respondents shall further notify EPA in writing regarding the identity and qualifications of the supervisory person or persons who will be primarily responsible for carrying out the terms of this Order. All supervisory personnel, contractors, subcontractors and/or other persons performing cleanup activities at the Site shall meet the applicable Occupational Safety and Health Administration ("OSHA") requirements as defined in 29 C.F.R. §1910.120. The supervisory personnel, contractors, and subcontractors, including any replacements, are subject to acceptance by EPA. EPA may disapprove the use of any supervisory personnel, contractor and/or subcontractor if EPA believes any such entity is not qualified to perform the Work. In the event of a disapproval by EPA, Respondents shall notify EPA within five (5) days of receipt of EPA disapproval of the supervisory personnel, contractor or subcontractor who will replace the one(s) disapproved by EPA.

8.3 Within five (5) business days of the effective date of this Order, Respondents shall submit a Work Plan ("WP") to the EPA for the Work to be implemented and shall include a schedule of operations for expeditious performance of the Work. The WP shall be consistent with the NCP and shall be subject to approval by EPA according to the provisions of paragraphs 8.4. and 8.8 below. The following are the minimum specific Work items that are to be detailed in the WP:

a. A Site Health and Safety Plan ("Safety Plan") to protect the health of workers, other personnel and the public from the hazardous substances and work-related health and safety hazards during performance of the work specified herein;
b. A plan to provide site security;
c. A plan to provide fire protection;
d. A plan to identify, segregate and dispose of materials at the Site including contaminated soils and drums containing contaminated materials;
e. A plan to remove contamination from the Site;
f. Obtain a Hazardous Waste Generator Identification Number; and
g. An expeditious schedule for implementation of the WP.

8.4 EPA will review the WP and notify the Respondents of EPA's approval or disapproval of the WP. In the event of disapproval, EPA will specify the deficiencies in writing. The Respondents shall respond to and correct the deficiencies identified by EPA and resubmit the WP to EPA within five (5) business days of receipt of EPA disapproval. Approval, disapproval and/or modification by EPA of the subsequent WP submission shall be according to the provisions of Paragraph 8.8 below. Approval of the WP shall not limit EPA's authority under the terms of this Order to require Respondents to conduct activities consistent with this Order to accomplish the Work outlined in paragraph 8.3 of this Order.

8.5 Within five (5) business days of receipt from EPA of written approval of the WP, the Respondents shall begin implementation of the Work in accordance with the WP and the schedule therein, and shall further conduct and complete the Work required in the WP in accordance with the approved WP and schedule therein.

8.6 Beginning seven (7) calendar days subsequent to the date of receipt of EPA approval of the WP and continuing until EPA advises Respondents that the Work is complete, the Respondents shall provide EPA with a progress report for each preceding 7 day period. The progress reports shall include, at a minimum: 1) a description of the Work completed and the actions that have been taken toward achieving compliance with this Consent Order; 2) a description of all data anticipated and activities scheduled for the next 7 days; 3) a description of any problems encountered or anticipated; 4) any actions taken to prevent or mitigate such problems; 5) a schedule for when such actions will be completed; 6) copies of all analytical data received during the reporting period; and 7) all proposed modifications to the Work, WP and schedule made during the reporting period.

8.7 Documents, including work plans, reports, sampling results and other correspondence to be submitted pursuant to this Order shall be sent certified or express mail to the EPA Project Officer, designated pursuant to Paragraph 9.2.

8.8 All WPs, reports, plans, specifications, schedules and attachments required by this Order are subject to EPA approval and shall be incorporated into this Order upon approval by EPA. In the event that EPA disapproves any required submission, EPA will specify the deficiencies in writing. Within five (5) business days of receipt of EPA disapproval, Respondents shall amend and submit to EPA a revised submission that responds to and corrects the specified deficiencies.

In the event of subsequent disapproval of the revised submission, EPA may submit its own modifications to the Respondents, in which case the Respondents are hereby required to

implement such modifications. Alternatively, EPA may perform the response action and seek reimbursement of its costs from Respondents and/or take any other action authorized by law.

Any non-compliance with such EPA-approved WPs, reports, plans, specifications, schedules, and attachments, submission of deficient revisions following EPA disapproval, or non-compliance with EPA required modifications in the case of subsequent disapprovals as specified in this paragraph shall be considered a failure to comply with a requirement of this Order. Determination(s) of non-compliance will be made by EPA. In the event that EPA disapproves the revised submission(s) and EPA subsequently performs the response action, EPA retains the right to seek reimbursement of its costs, including treble damages pursuant to Section 107(c) of CERCLA.

8.9 Respondents shall provide to EPA upon request any and all information resulting from and/or pertaining to Work performed by Respondents pursuant to this Order including, but not limited to, analytical data (including raw data), Site safety data, Site monitoring data, operational logs, copies of all hazardous waste manifests (including copies of all hazardous waste manifests signed upon receipt of the hazardous wastes by a licensed treatment, storage or disposal facility), identities of treatment, storage and/or disposal facilities used, identities of transporters used, and identities of any contractors and subcontractors used. Nothing herein shall be interpreted as limiting the inspection and information-gathering authority of EPA under Federal law.

8.10 Within ten (10) calendar days of the completion of all of the Work required in the approved WP, Respondents shall submit a written report to EPA detailing the Work completed, and notifying EPA of such completion. EPA may inspect the Work for adequacy of Respondents' performance of such Work. EPA will notify Respondents, in writing, of any Work deficiencies and the corrective Work actions required to correct these deficiencies at the Site. Such required corrective Work actions shall be consistent with the NCP and all applicable Federal laws or regulations. Respondents shall take the necessary corrective Work actions to address any Work deficiencies identified by EPA.

8.11 Respondents shall not remove any waste materials from the Site, except in conformance with the terms of this Order and all applicable Federal, State or local laws or regulations, as required by the NCP.

8.12 Respondents shall not commence any response actions or Work required by this Order, except in conformance with the terms of this Order. No Respondent shall interfere in any way with the performance of response actions in accordance with this Order by any other Respondent(s).

IX. DESIGNATED PROJECT COORDINATORS

9.1 Within five (5) days of the effective date of this Order, Respondents shall designate a Project Coordinator. Respondents' Project Coordinator shall be responsible for overseeing the Work required by this Order. The Respondents shall notify EPA of their designated Project Coordinator no later than five (5) days after the effective date of this Order. To the maximum extent possible, communications between the Respondents and EPA, and all documents, including WP, reports, approvals, and other correspondence, concerning the activities performed pursuant to the terms and conditions of this Order, shall be directed to the Project Coordinators by certified mail.

9.2 The Project Coordinator for EPA is:

Glen S. Lapsley
On-Scene Coordinator
U.S. Environmental Protection Agency
Enforcement and Title III Section (3HW33)
841 Chestnut Building
Philadelphia, PA 19107
(215) 597-6684

9.3 The Respondents shall have the right to change their Project Coordinator. Such a change shall be accomplished by notifying EPA in writing at least three (3) days prior to the change.

9.4 EPA shall have the ability to change its Project Coordinator at any time without prior notice to Respondents. EPA's intent is to notify the Respondents as soon as practicable following any such change of its Project Coordinator.

9.5 The absence of the EPA Project Coordinator from the Site shall not be cause for the stoppage or delay of Work except when such stoppage or delay is specifically required by EPA.

X. QUALITY ASSURANCE

10.1 The Respondents shall use quality assurance, quality control, and chain of custody procedures in accordance with the "EPA NEIC Policies and Procedures Manual" dated May 1978, revised November 1984, EPA Document 330/9-78-001-R and "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans," December 1980, QAMS-005/80, while conducting all sample collection and analysis activities required by this Consent Order. The Respondents shall consult with EPA in

planning for, and prior to, all sampling and analysis required by the approved WP. The Respondents shall use a laboratory(s) which has a documented Quality Assurance Program that complies with EPA guidance document QAMS-005/80.

10.2 Respondents shall provide EPA with all information and documents in their custody, possession or control concerning Respondents' compliance with Quality Assurance and Quality Control upon EPA's written request.

XI. SITE ACCESS

11.1 As of the effective date of this Order, Respondents shall provide access to EPA and its employees, agents, consultants, contractors, and other authorized and/or designated representatives for the purposes of conducting and/or overseeing any Work required by or relating to this Order. Such access shall permit EPA and its employees, agents, consultants, contractors, and other designated representatives to conduct all activities described in paragraph 11.3 of this Order.

11.2 To the extent that property wherein Work must be undertaken pursuant to the terms and conditions of this Order is presently owned or controlled by parties other than Respondents to this Order, the Respondents shall use their best efforts to obtain Site access arrangements from the present owners within five (5) days of the effective date of this Order. Such agreements shall provide reasonable access for EPA, and the Respondents and their designated representatives, including for those activities outlined in 11.3 below. Acceptable access arrangements must involve access agreements fulfilling the requirements of paragraphs 11.1 and 11.3 of this Order. In the event that the property owner refuses to provide such access or access agreements are not obtained within the time designated above, whichever occurs sooner, the Respondents shall notify EPA, in writing, within five (5) days of all efforts to obtain access and the circumstances of the failure to obtain access. The Respondents shall also notify EPA of all efforts to obtain such agreements. EPA may then take steps to provide such access.

11.3 EPA and/or its representatives shall have the authority to enter and freely move about the location where the response action and/or Work is being performed at all reasonable times for the purpose of, inter alia: inspecting Work, inspecting records, operating logs, and contracts related to the Site; reviewing the progress of the Respondents in carrying out the terms of this Order; conducting such tests as EPA deems necessary; using a camera, sound recording or other documentary type equipment; and verifying the data submitted to EPA by the Respondents. The Respondents shall permit such persons to inspect and copy all

records, files, photographs, documents, and other writings, including all sampling and monitoring data, in any way pertaining to Work undertaken pursuant to this Order.

11.4 Notwithstanding any provision of this Consent Order, EPA retains all of its access and information-gathering authorities and rights under CERCLA, and any other applicable statute or regulation.

XII. RESERVATION OF RIGHTS

12.1 EPA reserves all rights, claims, interests, and defenses it has under CERCLA or any other law or in equity.

12.2 Nothing herein shall be construed to prevent EPA from seeking legal or equitable relief to enforce the terms of this Order, to seek injunctive relief, and/or to seek the imposition of statutory penalties.

12.3 This Order concerns certain removal response activities (the Work described in Section VIII above) relating to the Site. The Work required by this Order may not fully address all contamination at the Site. Subsequent response activities which may be deemed necessary by EPA are not addressed by this Order.

12.4 EPA reserves its right to disapprove of Work performed by the Respondents and/or other persons pursuant to this Order, to require Respondents and/or other persons to correct and/or to re-perform any and all Work disapproved by EPA, and to require the Respondents and/or other persons to perform response actions in addition to those required by this Order.

12.5 EPA reserves the right to take enforcement actions, including actions for monetary penalties, for any violation of law, regulation, or of this Order. Failure to comply with this Order subjects Respondents to the assessment of civil penalties of up to $25,000 per day and/or punitive damages in an amount up to three times the amount of any costs incurred by the United States as a result of such failure pursuant to Sections 106(b) and 107(c) of CERCLA, 42 U.S.C. §§9606(b) and 9607(c). EPA may also undertake such other actions as it may deem necessary or appropriate for any purpose including, but not limited to, actions pursuant to Sections 104 and/or 106 of CERCLA, 42 U.S.C. §§9604 and/or 9606.

12.6 EPA reserves the right to undertake removal and/or remedial actions, including all actions required by this Order, at any time such actions are appropriate under CERCLA and the NCP and to seek reimbursement from Respondents and/or other persons for any costs incurred.

12.7 EPA reserves the right to bring an action against the Respondents and/or other persons pursuant to Section 107 CERCLA, 42 U.S.C. §9607, for recovery of all response and oversight costs incurred by the United States in connection with this Order and not reimbursed by Respondents and/or other persons, as well as any other costs incurred by the United States in connection with response actions relating to the Site.

12.8 Nothing in this Order shall limit the authority of the On-Scene Coordinator as outlined in the NCP and CERCLA.

12.9 All references to "Respondents" shall mean Respondents to this Order as well as each Respondent individually. Nothing herein shall restrict EPA's enforcement discretion to determine which Respondents it may pursue for violation(s) of this Order.

XIII. OTHER CLAIMS

13.1 Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, or corporation not bound by this Order for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal or any hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from the Site.

13.2 This Order does not constitute any decision on preauthorization of funds under Section 111(a)(2) of CERCLA, 42 U.S.C. §9611(a)(2).

13.3 Neither EPA nor the United States, by issuance of this Order, assumes any liability for any acts or omissions by Respondents, or Respondents' employees, agents, contractors, or consultants engaged to carry out any action or activity pursuant to this Order, nor shall EPA or the United States be held as a party to any contract entered into by Respondents or by Respondents' employees, agents, contractors, or consultants engaged to carry out the requirements of this Order.

13.4 Nothing herein shall constitute or be construed as a satisfaction or release from liability of Respondents or any other person.

XIV. OTHER APPLICABLE LAWS

14.1 All Work required to be taken pursuant to this Consent Order shall be undertaken in accordance with the requirements of all applicable local, State, and Federal laws and regulations, as required by the NCP.

XV. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

15.1 The effective date of this Order shall be one (1) day after the date on which it is signed by the Regional Administrator of EPA Region III.

15.2 Any WPs, reports, plans, specifications, schedules, or other submissions required by this Order are, upon approval by EPA, incorporated into this Order. Any non-compliance with such EPA-approved reports, plans, specifications, schedules, or other submissions shall be considered non-compliance with the requirements of this Order. Determinations of non-compliance will be made by EPA.

15.3 No informal advice, guidance, suggestions or comments by EPA regarding WPs, reports, plans, specifications, schedules, or other submissions by the Respondents or the requirements of this Order will be construed as relieving the Respondents of their obligation to obtain formal approval when required by this Order, and to comply with the requirements of this Order unless formally modified.

15.4 This Order may be modified or amended by the EPA Region III Regional Administrator. Such modifications or amendments shall be effective on the date they are signed by the Regional Administrator or such other date as set by the Regional Administrator. Minor modifications to the Work, WP and or schedule may be approved by the EPA Project Coordinator.

XVI. LIABILITY OF THE UNITED STATES GOVERNMENT

16.1 Neither the United States Government nor any agency thereof shall be liable for any injuries or damages to persons or property resulting from acts or omissions of Respondents, or of their employees, agents, servants, receivers, successors, or assigns, or of any persons, including, but not limited to firms, corporations, subsidiaries, contractors, or consultants, in carrying out activities, including but not limited to Work pursuant to this Order, nor shall the United States Government or any agency thereof be held as a party to any contract entered

into by Respondents in carrying out activities, including but not limited to Work pursuant to this Order.

XVII. CERTIFICATION OF COMPLIANCE

17.1 Any notice, report, certification, data presentation, or other document submitted by Respondents under or pursuant to this Order, which discusses, describes, demonstrates, or supports any finding or makes any representation concerning Respondents' compliance or non-compliance with any requirement(s) of this Order shall be certified by a responsible official of the Respondents. The term "responsible official" for a corporation means a responsible corporate officer: (a) a president, secretary, treasurer or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (b) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $35 million (in 1987 dollars when the consumer price index was 345.3), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. The responsible official for a partnership or sole proprietorship means a general partner or the proprietor, respectively.

17.2 The certification of the Respondents required by paragraph 17.1 of this Order shall be in the following form:

> Except as provided below, I certify that the information contained in or accompanying this (type of submission) is true, accurate, and complete. As to (the/those) portion(s) of this (type of submission for which I cannot personally verify (its/their) accuracy, I certify under the penalty of law that this (type of submission) and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting

false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____
Name(print): _____
Title: _____

XVIII. CALCULATION OF TIME

18.1 Any reference to "days" in this Order shall mean calendar days, unless otherwise specifically provided herein. Any reference to "business days" shall mean every day of the week except Saturdays, Sundays and federal holidays.

XIX. FAILURE TO PERFORM/PERFORMANCE EVENTS

19.1 In the event of an inability or anticipated inability on the part of Respondents to perform any of the actions or Work required by this Order in the time and manner required herein, the Respondents' Project Coordinator shall notify EPA orally within twenty-four (24) hours of such event (or, if the event occurs on a Friday or Saturday, no later than the following Monday) and in writing as soon as possible, but in no event more than three (3) days after such event. Such notice shall set forth the reason(s) for, and the expected duration of, the inability to perform; the actions taken and to be taken by Respondents to avoid and mitigate the impact of such inability to perform; and the proposed schedule for completing such actions. Such notification shall not relieve Respondents of any obligation of this Order. Respondents shall take all reasonable actions to prevent and minimize any delay.

19.2 Respondents shall immediately notify EPA's Project Coordinator and the National Response Center in the event of any action or occurrence during the pendency of this Order which causes or threatens to cause an additional release of hazardous substances, pollutants, or contaminants on, at, or from the Site, or which may create a danger to public health or welfare or the environment.

19.3 Failure by Respondents to carry out any requirement of this Order in accordance with the terms and conditions specified herein may result in the unilateral performance of the required actions by EPA pursuant to applicable authorities, an action to recover treble damages pursuant to CERCLA, and/or the initiation of an enforcement action against Respondents to require Respondents to perform such actions, in addition to any other relief that may be available to EPA pursuant to applicable law.

19.4 Nothing in this paragraph or any other provision of this Order shall be construed so as to limit any powers EPA may have under CERCLA, the NCP, or any other law or regulation.

XX. NOTICE OF INTENT TO COMPLY

20.1 Each Respondent shall notify EPA's Project Coordinator within twenty-four (24) hours after the effective date of this Order of that Respondent's intention to comply with the terms of this Order. That response will be in the form of telephone notification to the EPA Region III Hotline at (215) 597-9898. Telephone notification will be followed by a letter to EPA's Project Coordinator. Failure of any Respondent to provide notification to EPA's Project Coordinator of intent to comply within this time period shall be deemed a violation of this Order by that Respondent.

XXI. OPPORTUNITY TO CONFER WITH EPA

21.1 Not later than three (3) business days from the effective date of this Order, Respondents may confer with EPA to discuss this Order. Such conference is not an adversarial hearing or part of a proceeding to challenge this Order, and no official stenographic record of such conference shall be kept.

XXII. ADMINISTRATIVE RECORD

22.1 The Administrative Record upon which this Order is issued is available for review by Respondents' representatives at their request. Requests to review the Administrative Record shall be submitted to the EPA Project Coordinator designated pursuant to Section IX of this Order.

XXIII. TERMINATION AND SATISFACTION

23.1 The Respondents' obligations to EPA under this Order shall terminate and be deemed satisfied upon the Respondents' receipt of written notice from EPA that the Respondents have demonstrated, to the satisfaction of EPA, that all the terms of this Order have been satisfactorily completed.

Snow Hill Lane Site 18 Docket No. III-91-23-DC

IT IS SO ORDERED.

BY: _____
Edwin B. Erickson
Regional Administrator
Region III
U.S. Environmental Protection
Agency

DATE: 1/31/91

D. ANALYTICAL RESULTS

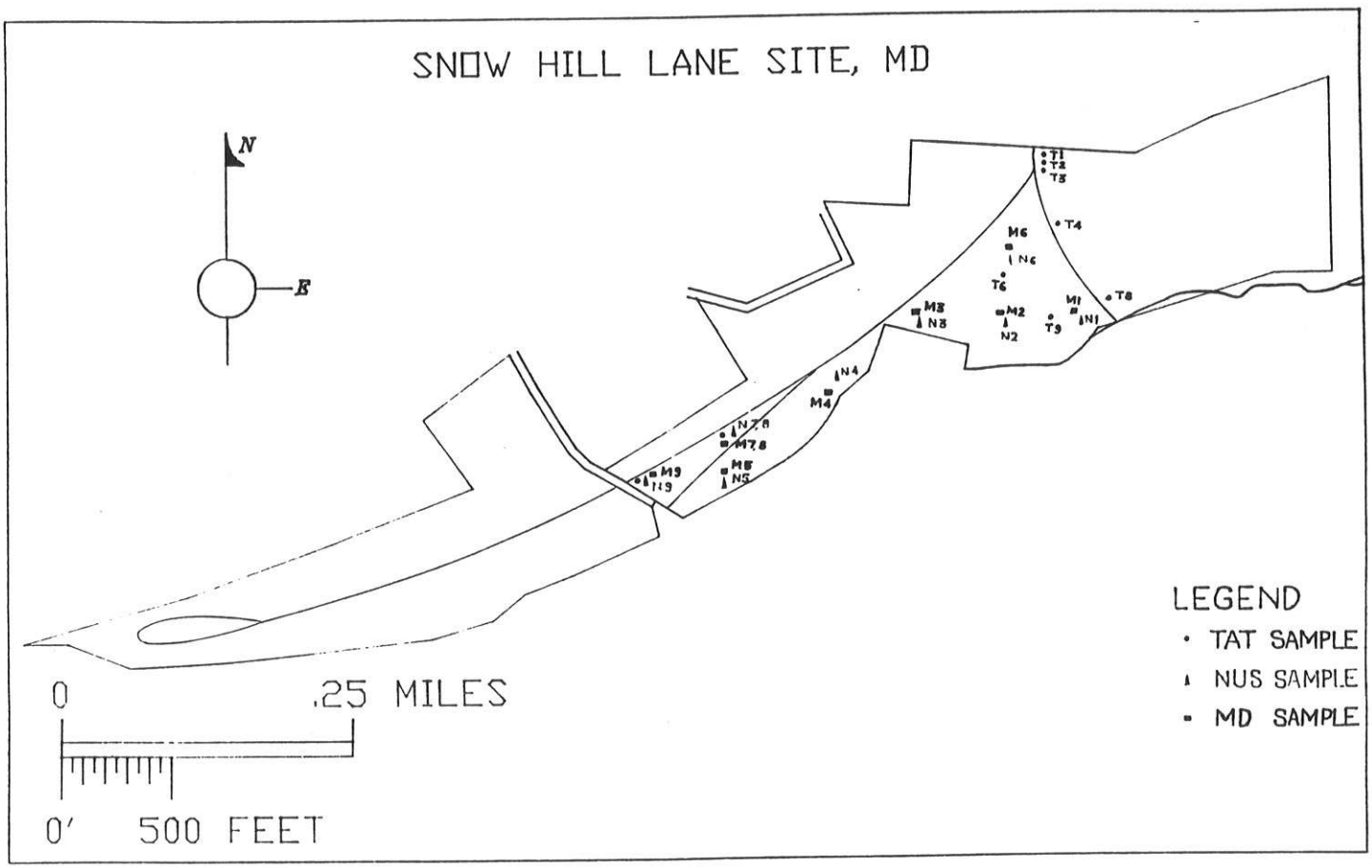


Table IV Snow Hill Lane Site Summary of Analytical Results TAT III – 7/90	
Total Cyanide mg/kg (ppm)	
Sample ID	CN
T–2	2
T–3	18
T–4	3
T–5	6.5
T–6	68

Note: The samples are composites of drum contents, soil and seepage from drums.

Table III Snow Hill Lane Site Summary of Analytical Results TAT III – 7/90	
Polychlorinated Biphenyls ug/g (ppm)	
Sample ID	PCB 1254
T–2	.08
T–3	170
T–4	3.0
T–6	250

Note: The samples are composites of drum contents, soil and seepage from drums.

Table II Snow Hill Lane Site Summary of Analytical Results TAT III – 7/90 TCLP Leachate Metals				
Sample ID	Ba	Cd	Cr	Pb
	mg/L (ppm)			
T–1	–	–	28	–
T–2	–	–	–	2.0
T–3	–	.2	–	100
T–6	1.0	.2	.7	20
T–7	4.3	–	.2	–
BACKGROUND	–	–	–	2.0

Note: The samples are composites of drum contents, soil and seepage from drums.

Table I Snow Hill Lane Site Summary of Analytical Results TAT III - 7/90 Priority Pollutant Metals Analysis (Total)							
Sample ID	Cd	Cr	Pb	Cu	Ni	Zn	Hg
	mg/kg (ppm)						
T-1	1.0	1,400	15,700	320	12	3,000	4.9
T-2	6.1	220	1,400	41	20	13,000	1.1
T-3	14	1100	12,000	11,000	21	4,400	25
T-4	3.3	570	700	590	8.7	480	3.8
T-5	-	42	200	50	5.8	150	1.3
T-6	9.1	510	3,700	98,000	32	6,200	200
T-7	1.1	11	70	75	8.1	88	.8
T-8	-	13	130	28	10	62	.12
T-9	6.5	310	350	260	9.4	490	3.2
BACKGROUND	.4	17	730	25	6.3	130	.073
Upstrm Sed	.5	6.4	18	23	-	90	-
Downstrm Sed	.8	2.4	14	17	-	13	-
	mg/L (ppm)						
W-3	-	-	.1	-	-	.08	-
WELL 325	-	-	.2	.07	-	.1	-
Upstrm Water	.008	-	.2	-	-	.09	-
Downstrm Wate	-	-	.2	-	-	.1	-

Note: The soil samples are composites of drum contents, soil and seepage from drums.

E. PHOTOGRAPHIC DOCUMENTATION

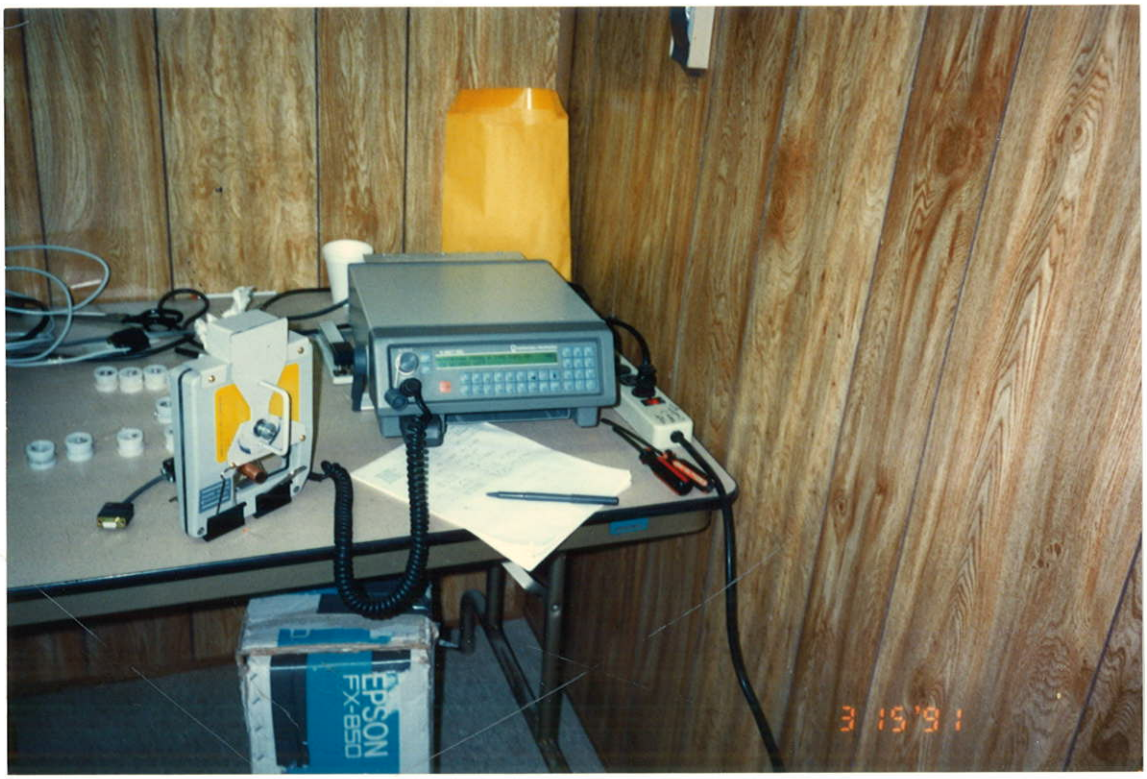
Photograph #	1
Date Taken	July 16, 1990
Photographer	Region III TAT
Description	Photo shows a pile of drums used as target practice, before removal activities.

Photograph #	2
Date Taken	February 14, 1991
Photographer	Region III TAT
Description	Photo showing a pile of drums discovered in Area "F", along Road #2 by Pennington Landfill during site reconnaissance.

Photograph #	3
Date Taken	February 14, 1991
Photographer	Region III TAT
Description	Photo of a drum in Area "F" by Road #2 discovered during site reconnaissance.

Photograph #	4
Date Taken	March 19, 1991
Photographer	Region III TAT
Description	A photo of several seeping drums located in Area "E". Bulking of these drums was performed after field compatibility tests indicated positive results.

Photograph #	5
Date Taken	February 19, 1991
Photographer	Region III TAT
Description	Photo showing EPA contractor performing an XRF screening on site for pre-assessment heavy metals determination.



Photograph #	6
Date Taken	February 19, 1991
Photographer	Region III TAT
Description	Photo shows XRF instrument analyzing site soil samples.

Photograph #	7
Date Taken	March 10, 1991
Photographer	Region III TAT
Description	Photo showing EPA contractors performing air monitoring and overpacking activities.

Photograph #	8
Date Taken	March 15, 1991
Photographer	Region III TAT
Description	A photo showing EPA contractors preparing the drum for overpacking.

Photograph #	9
Date Taken	March 14, 1991
Photographer	Region III TAT
Description	Photo shows over 250 drums in staging area.

Photograph #	10
Date Taken	March 17, 1991
Photographer	Region III TAT
Description	Photo showing a view of the section of fence that was run over by a vehicle on the evening of March 16, 1991.

Photograph #	11
Date Taken	April 22, 1991
Photographer	Region III TAT
Description	Photo shows bullet holes on posted signs along fence; one of the security problems encountered after daytime site activities ceased.

Photograph #	12
Date Taken	August 28, 1991
Photographer	Region III TAT
Description	Photo shows OSC Lee and MDE Representative discussing waste disposal options.

Photograph #	13
Date Taken	August 29, 1991
Photographer	Region III TAT
Description	Photo shows reclamation of site access following construction of barricade and fence installation.

F. XRF RESULTS

CASE HISTORY: SNOW HILL LANE SITE
THE X-RAY FLUORESCENCE (XRF) ANALYZER

The XRF instrument was used at Snow Hill Lane to characterize the site for arsenic, chromium, lead, iron and zinc. The instrument allowed a fast characterization in an economic manner. The Snow Hill Lane Site consisted of approximately 86 acres of open flatland, completely unfenced, in Brooklyn, Anne Arundel County, Maryland. The site was bounded on the west by Mount Calvary Cemetery and Snow Hill Lane, on the north by Cedar Hill Lane and the Pennington Avenue Landfill, and on the east by the Pennington Avenue Landfill and the Baltimore and Ohio Railroad.

Maryland Waste Management Administration (MWMA) Enforcement Program files indicated that this site may have been operated as an unpermitted dump. The dump was apparently operated by Mr. Henry Siejack, who operated a number of similar dumps in the Baltimore area during the 1950s and 1960s. A visual inspection of the site in February of 1982 revealed several surface piles of 55-gallon drums at different locations on the property. According to the inspector, most of the drums were vandalized and empty. In February 1984, an inspector from the MWMA Office of Environmental Programs estimated a total of 275 drums present onsite. Several trails, which appeared to have been made by motorcycle traffic were noted on the site. From 1984 to date, MWMA and NUS conducted sampling investigations that indicated the presence of polychlorinated biphenols (PCBs), pesticides, cyanide, lead, chromium and zinc in soil and water at the site. A complete site history may be found in the administrative records for this site.

The XRF was calibrated by the manufacturer's standards to screen the entire site. From this set of data, contour maps were developed to characterize the extent of contamination on the site. Triplicate samples at ten (10) locations were taken from various levels of contamination based on the contour maps. Two sets of samples (ten each) were sent to a laboratory for arsenic, barium, cadmium, chromium, lead, copper, nickel, zinc, iron and mercury analysis.

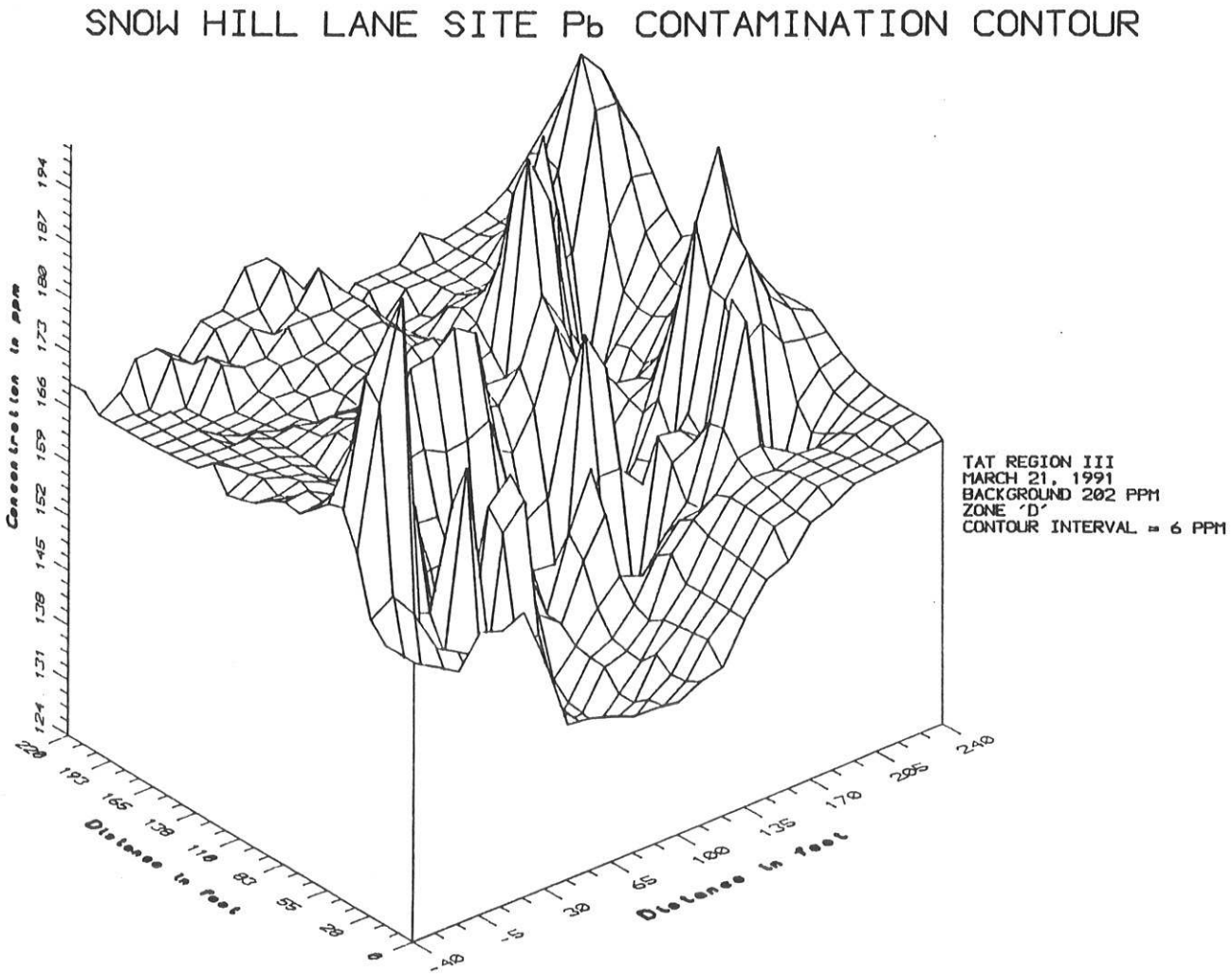
The laboratory provided signed chain-of-custody documentation. The field duplicates were collected and sent to the laboratory under a different name. One (1) matrix spike/matrix spike duplicate analysis per metal was analyzed on ten (10) percent of the samples for each matrix. The data was presented in tabular form with QC limits. The laboratory provided AA calibration data, method blank data and a case narrative explaining analysis procedures, digestion date and analysis dates.

The second set of samples were kept for site specific standards. The standards were prepared as follows:

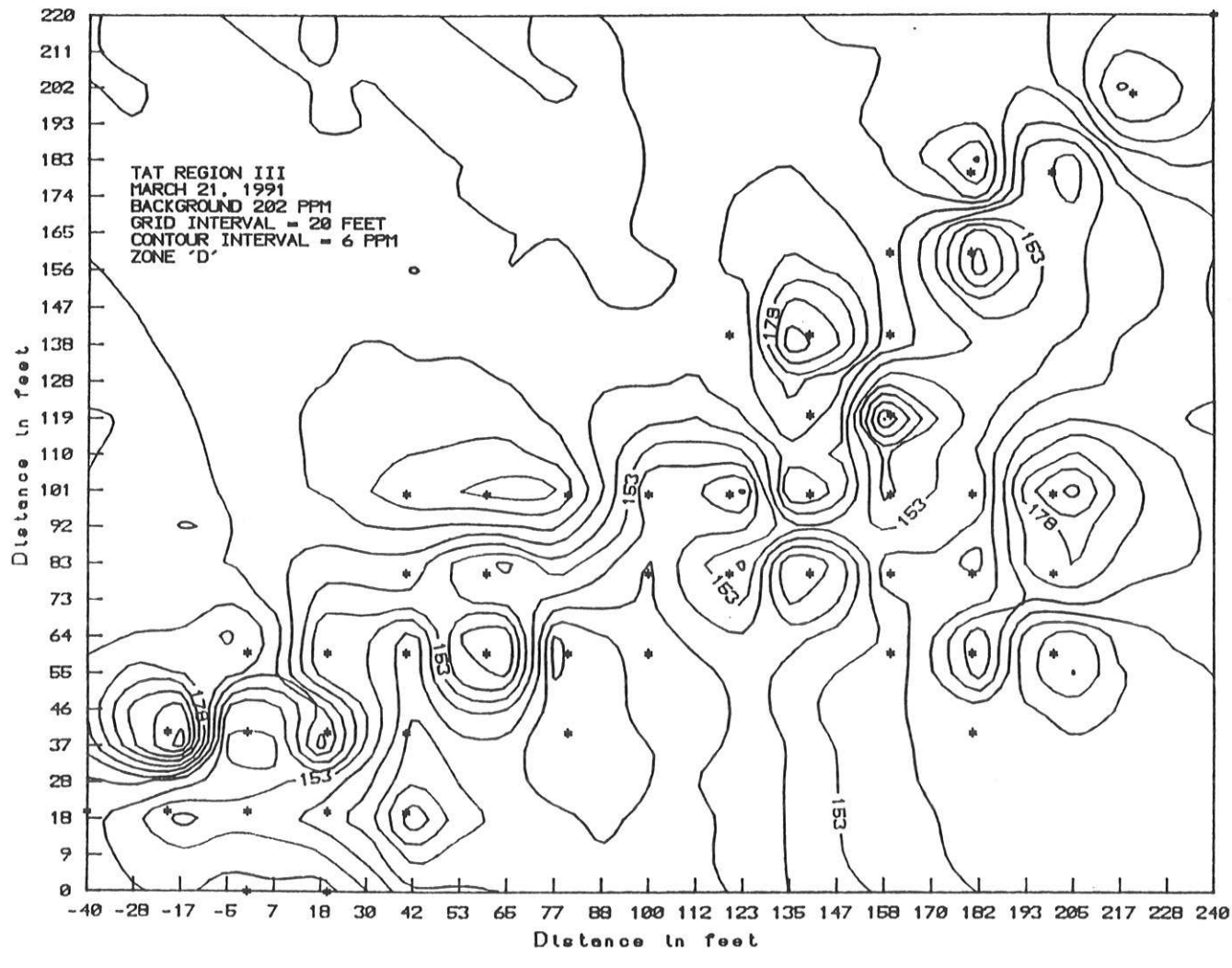
1. At least 200 grams of the sample were dried by air and a microwave.
2. All foreign objects such as twigs, bugs, vegetation, and pebbles were removed.
3. The soil was ground by putting it in plastic bags and then hammering for about 10 minutes.
4. The soil was sieved through a 200-mesh screen.
5. An aliquot, sufficient to fill the X-ray cup, was taken.
6. Prior to analysis, the cup was tapped until material stopped settling.
7. The soil was analyzed three times for 200 seconds each time, taking the average as the result.
8. The data given by the laboratory was used in conjunction with the data from the XRF. The XRF calibration was done by using an empirical calculation where the Kev. signal is graphed against the concentration (see operation manuals for further information).

Once the XRF was calibrated, it was used to screen the site to determine the extent of metal contamination on the site (see attached graphs). The sections with high contamination were excavated and a post assessment was performed to verify the results (see attached graphs).

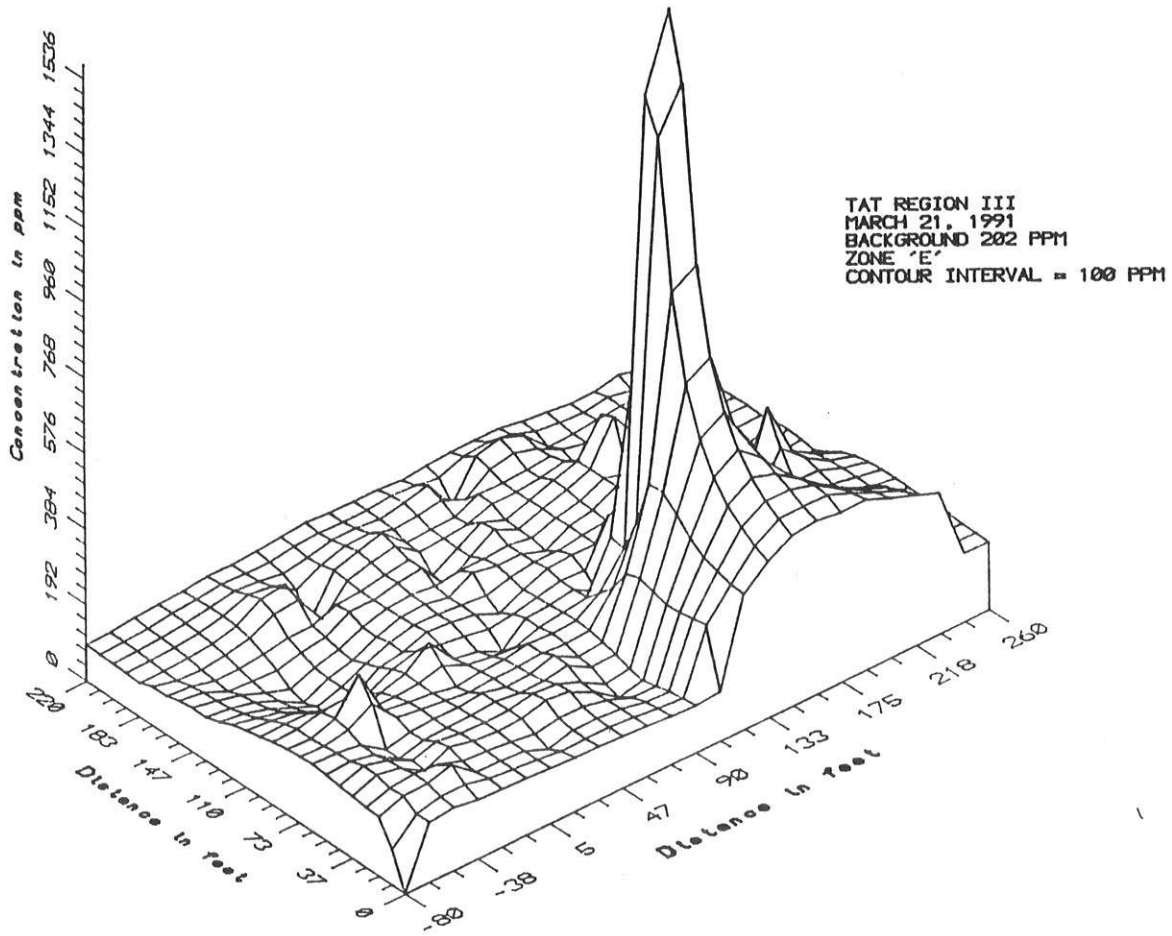
G. PRE-REMOVAL AND POST-REMOVAL XRF ASSESSMENT



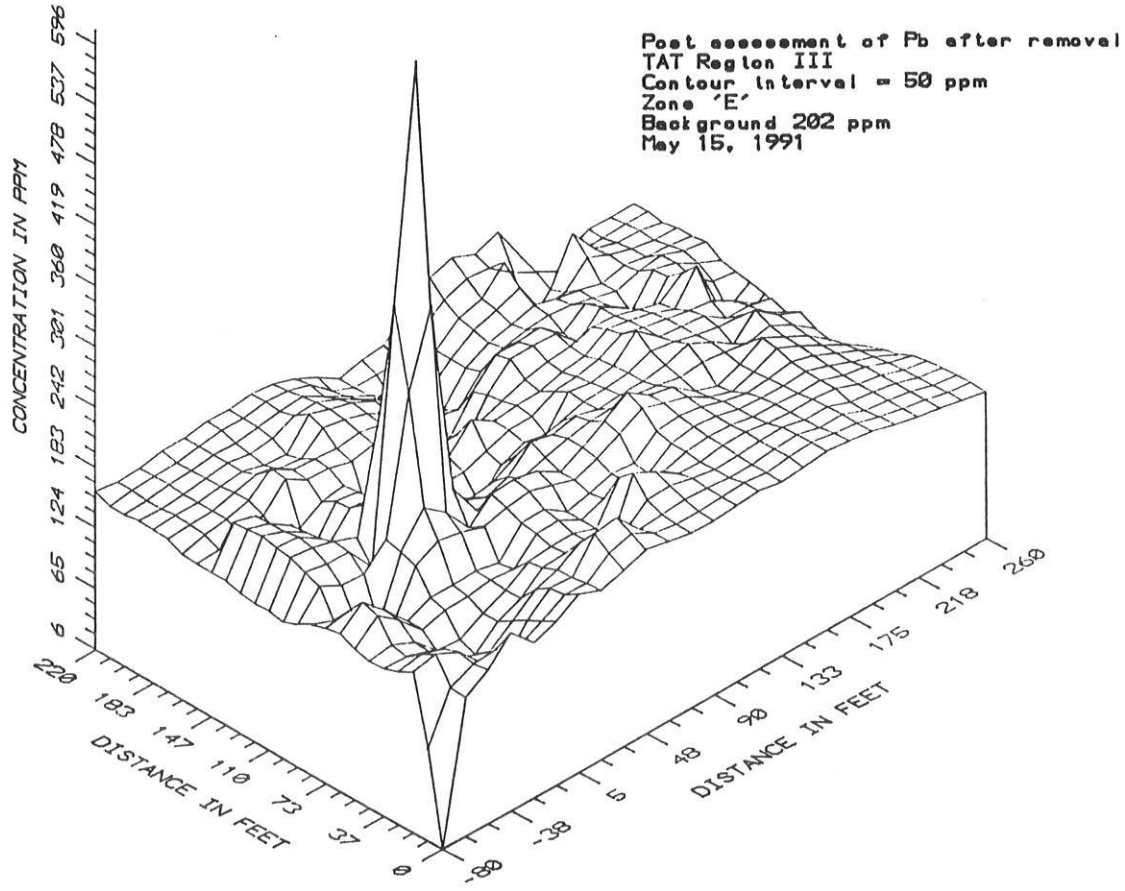
SNOW HILL LANE SITE Pb CONTAMINATION CONTOUR

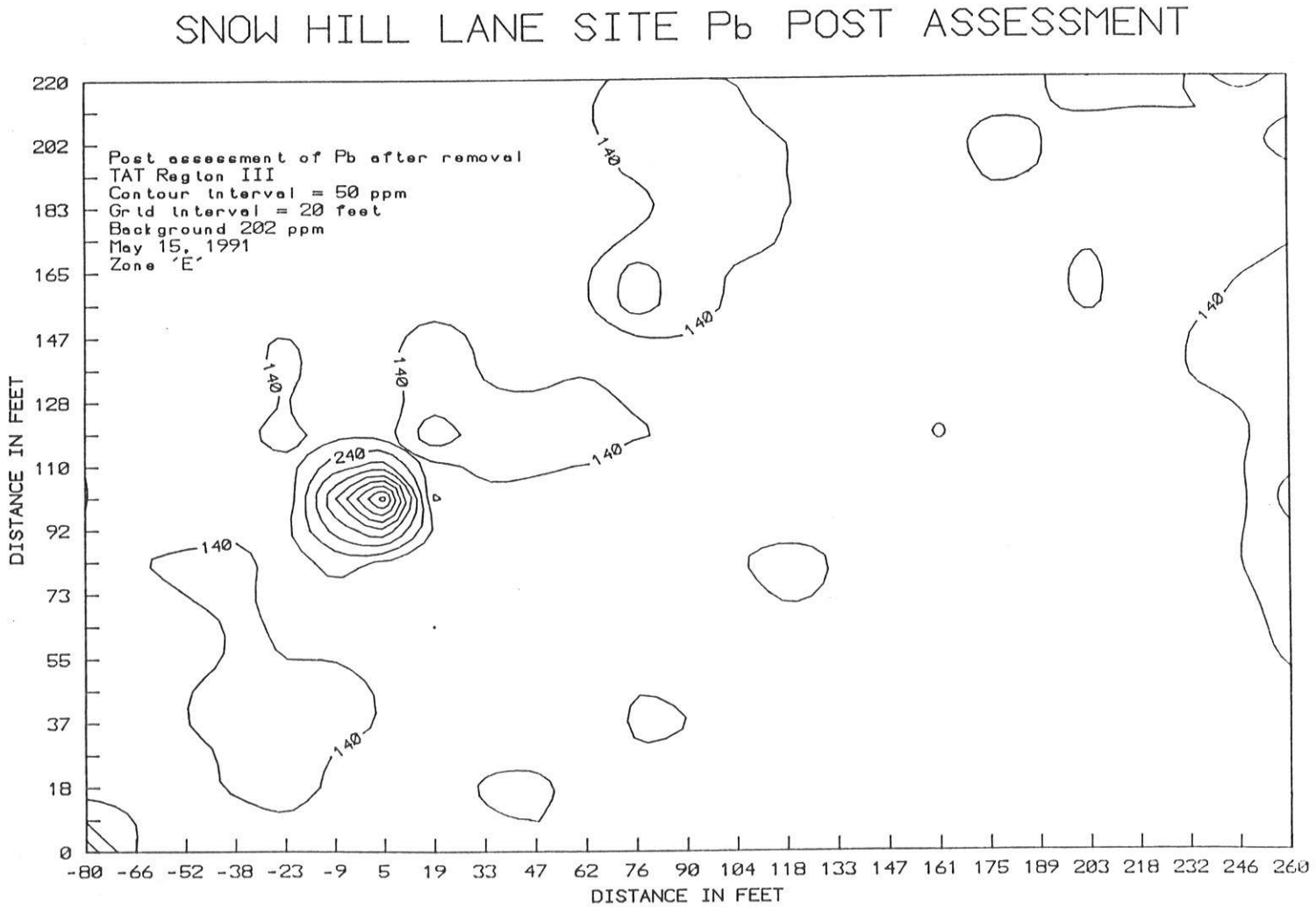


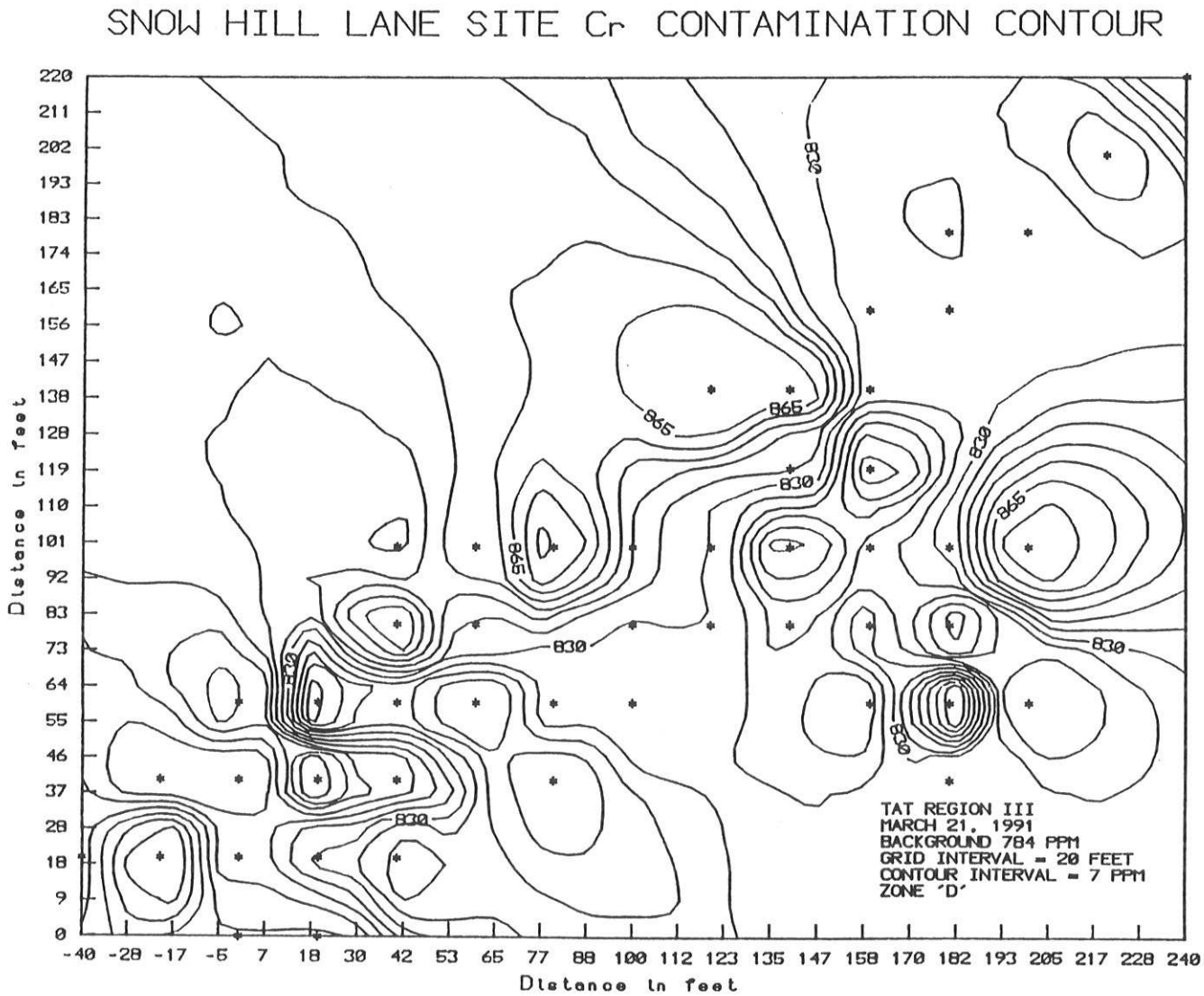
SNOW HILL LANE SITE Pb CONTAMINATION CONTOUR

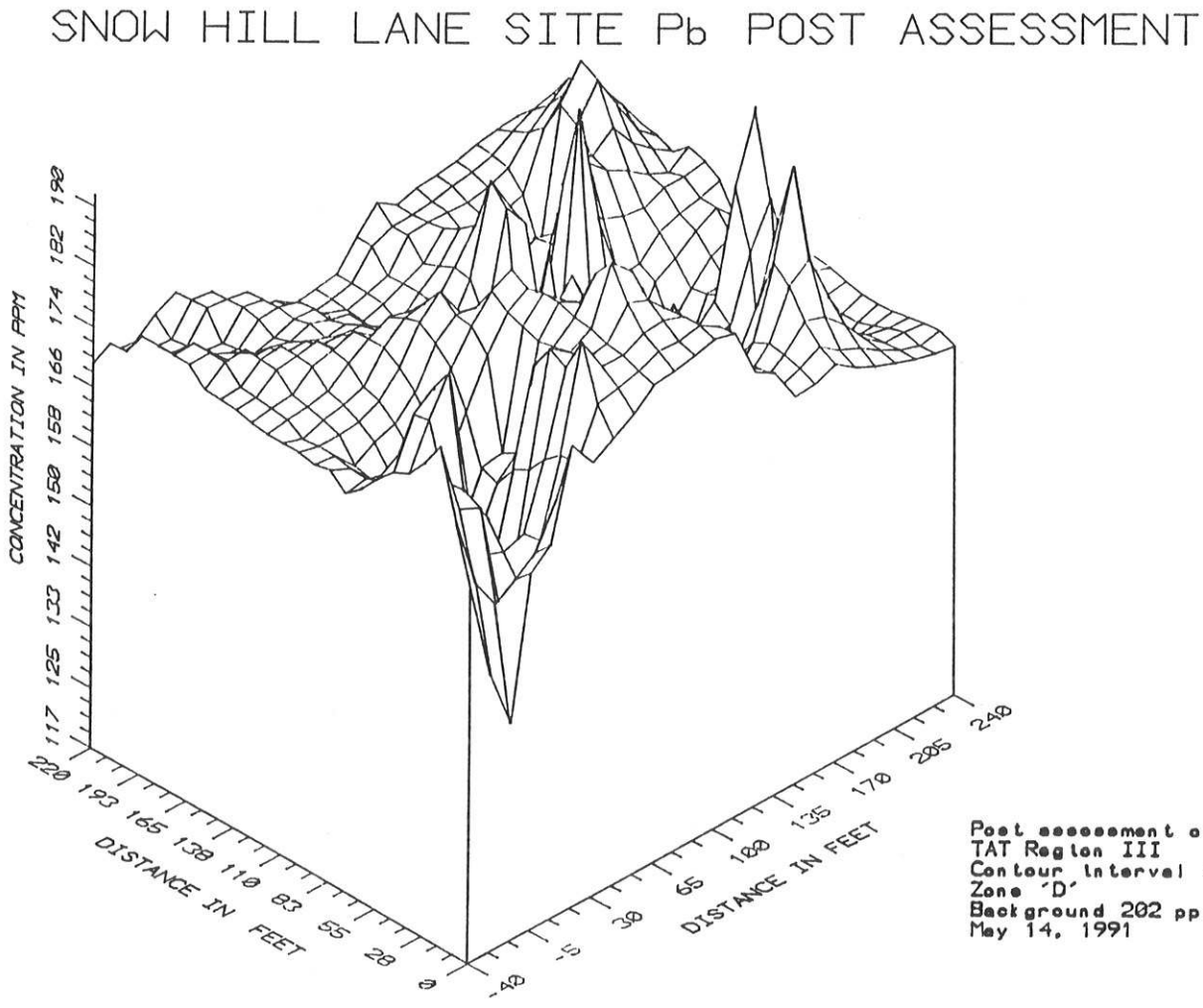


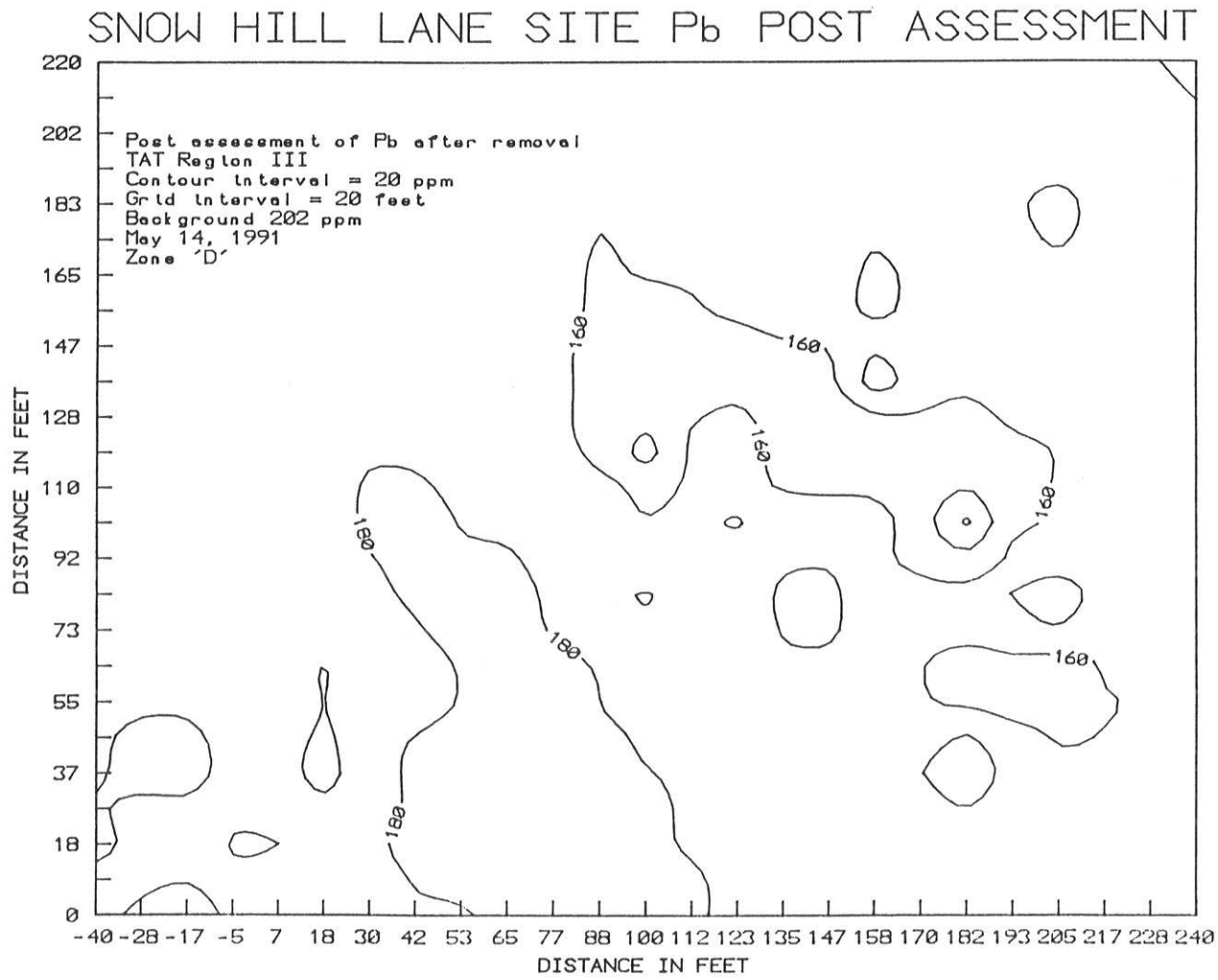
SNOW HILL LANE SITE Pb POST ASSESSMENT

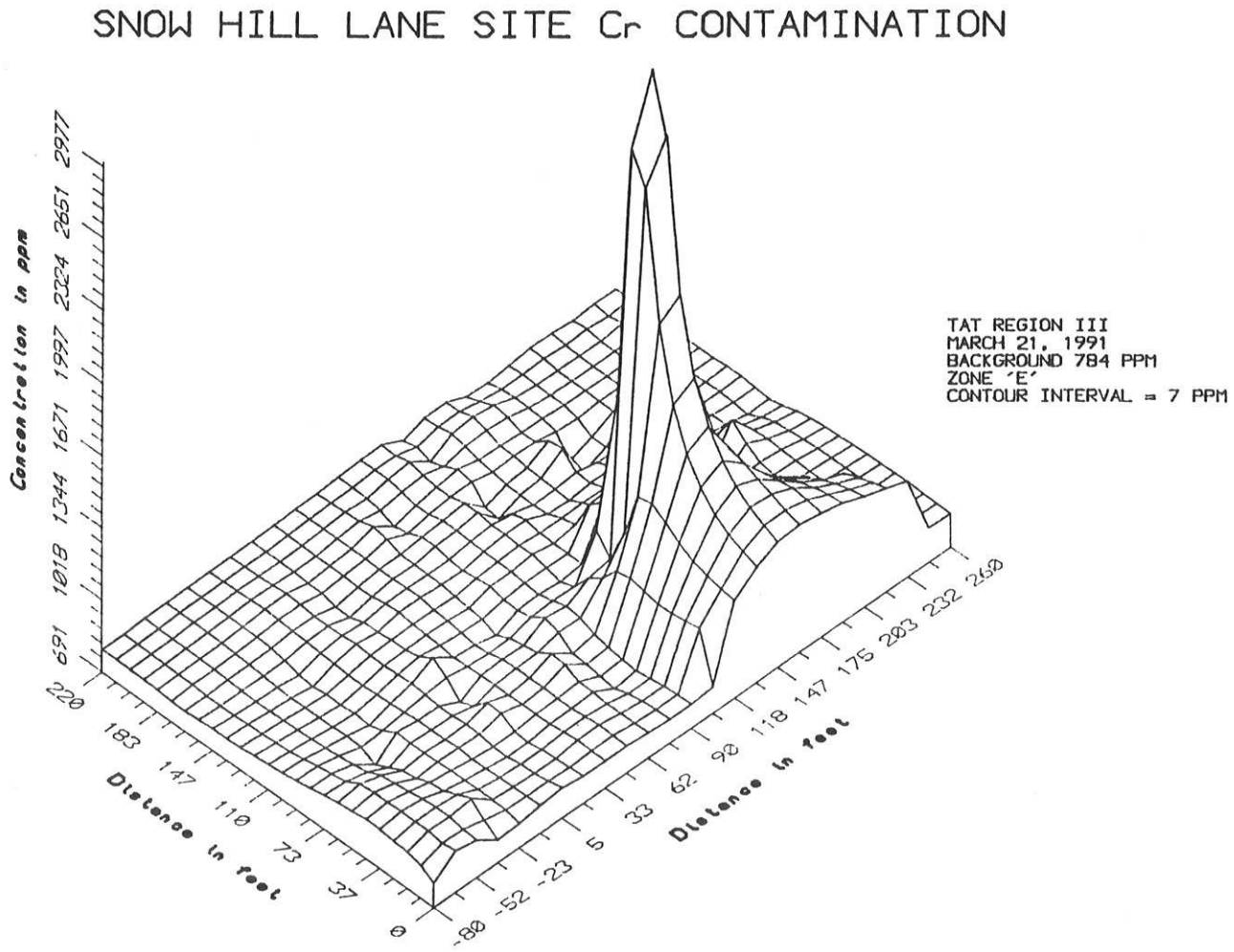


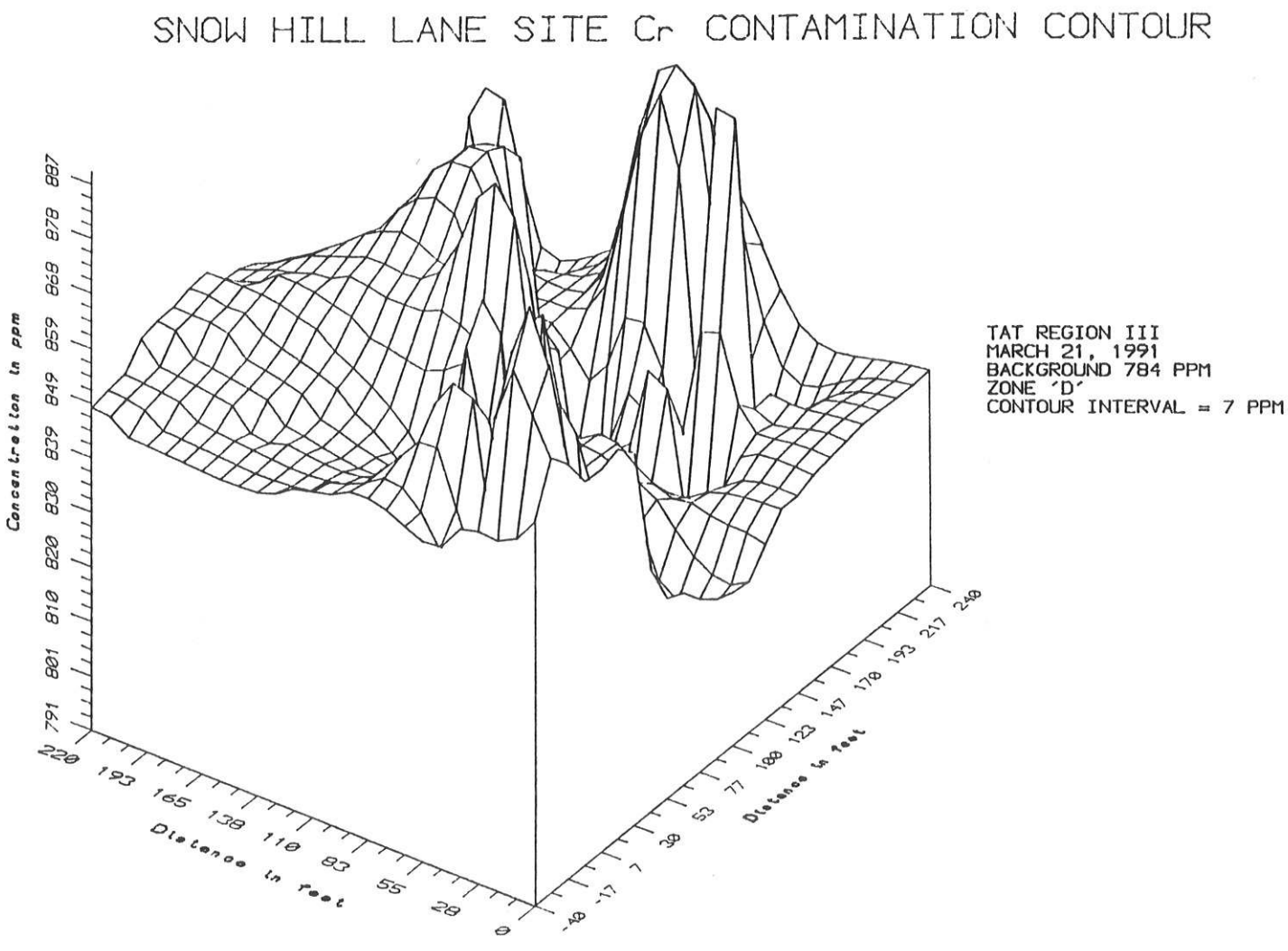


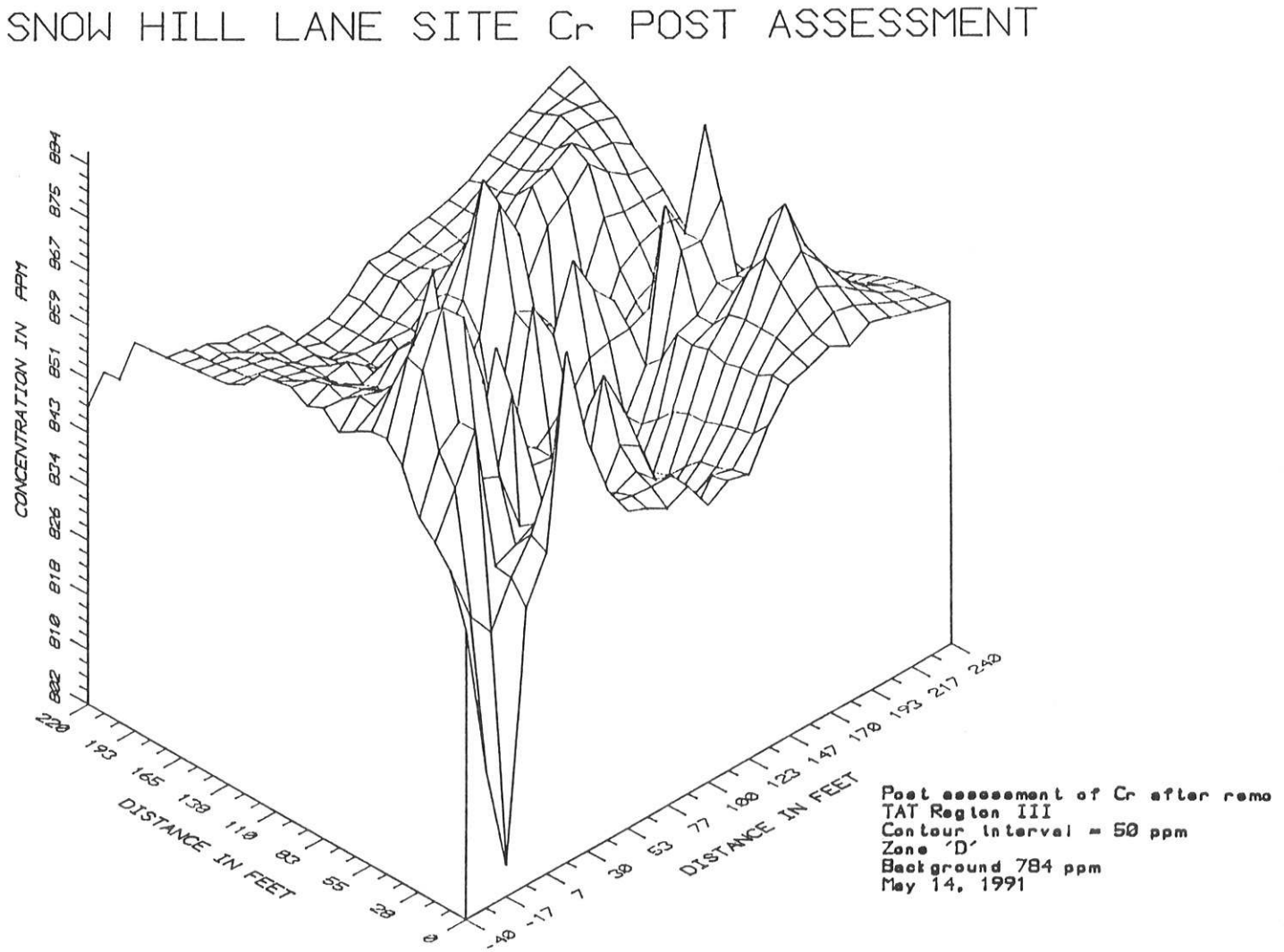


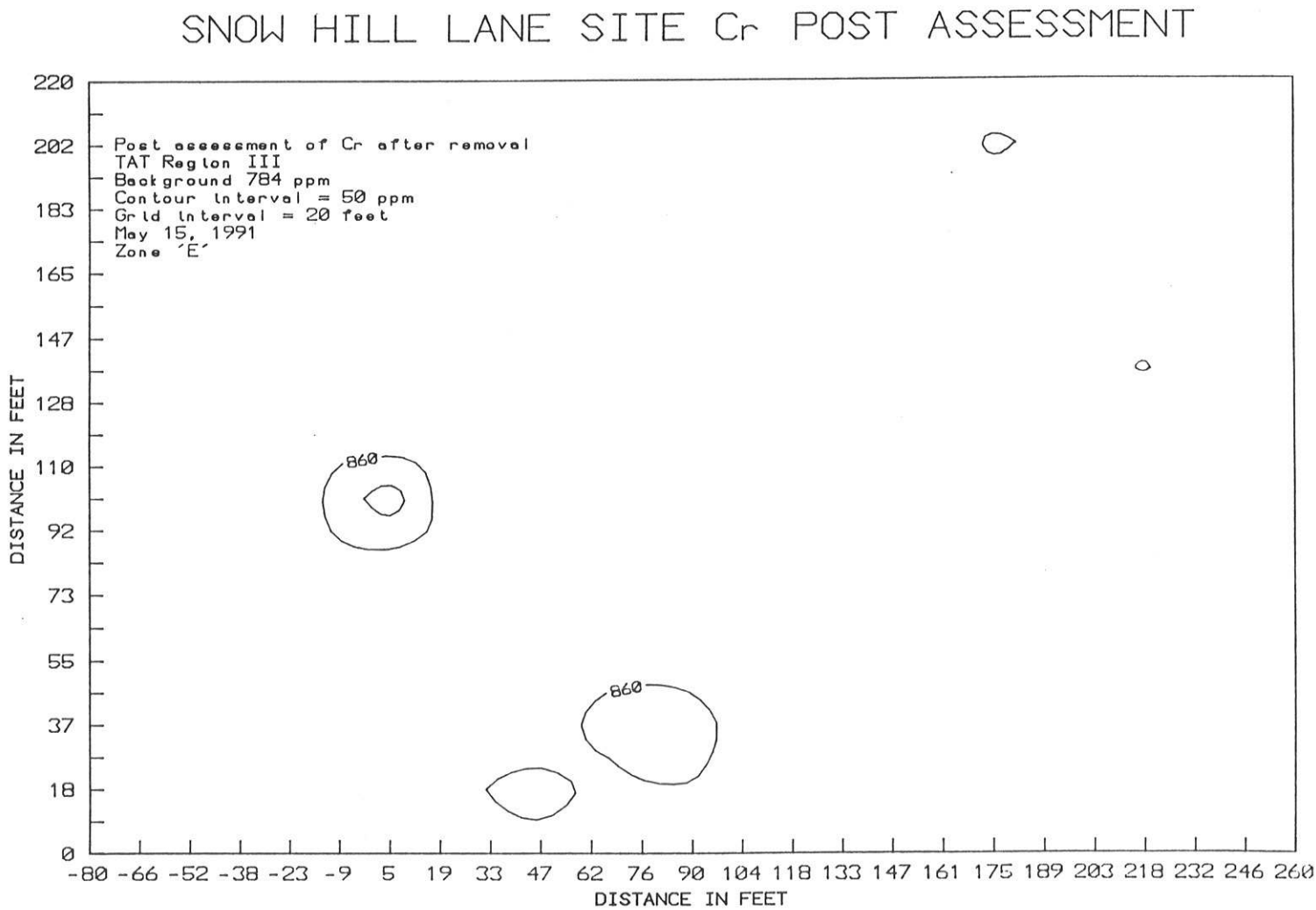

SNOW HILL LANE SITE Pb POST ASSESSMENT
CONCENTRATION IN PPM
117 125 133 142 150 158 166 174 182 190
DISTANCE IN FEET
220 193 165 138 110 83 55 28 0
DISTANCE IN FEET
-40 -15 10 35 60 85 110 135 160 185 210 240
Post assessment of Pb after removal
TAT Region III
Contour Interval = 50 ppm
Zone 'D'
Background 202 ppm
May 14, 1991

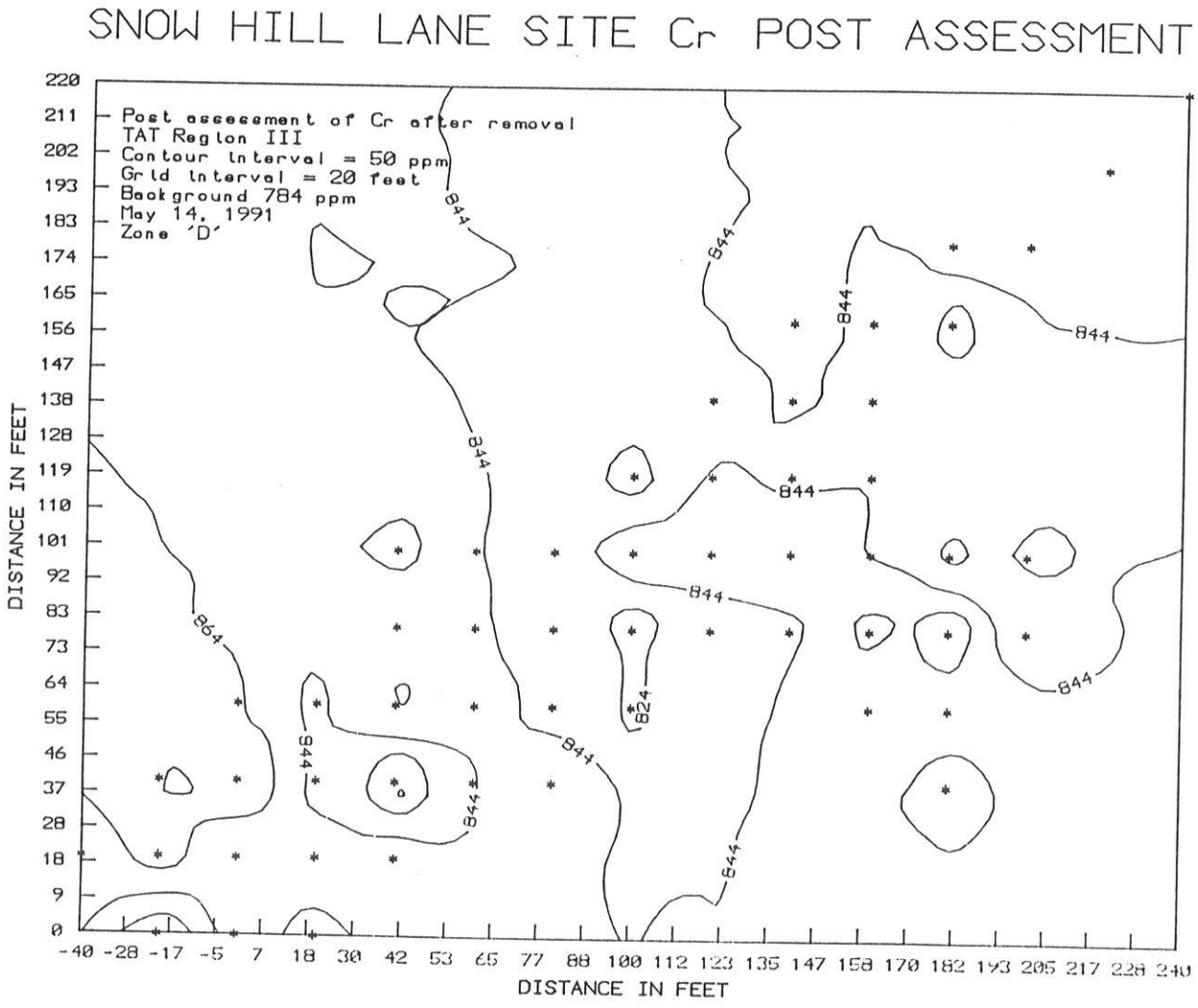




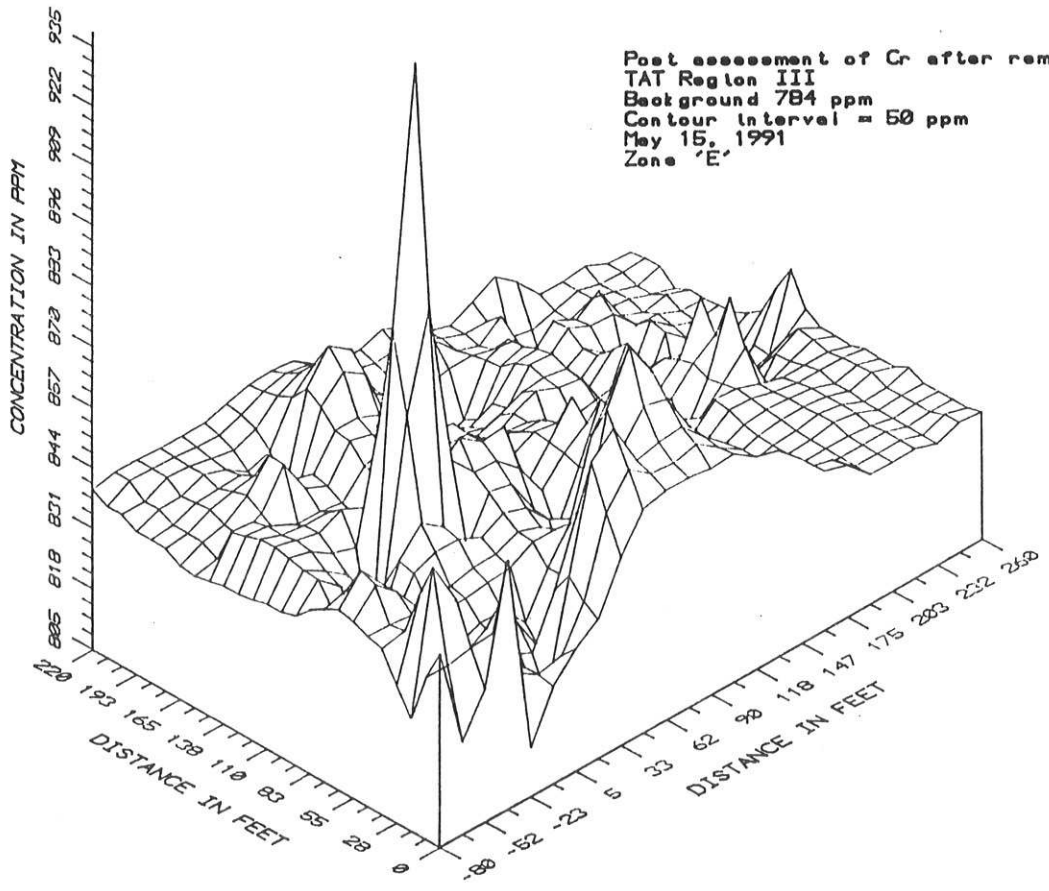

SNOW HILL LANE SITE Cr CONTAMINATION CONTOUR
Concentration in ppm
791 801 810 820 830 839 849 859 868 878 887
Distance in feet
220 193 165 138 110 83 55 28 0
Distance in feet
-40 -17 7 30 53 77 100 123 147 170 193 217 240
TAT REGION III
MARCH 21, 1991
BACKGROUND 784 PPM
ZONE 'D'
CONTOUR INTERVAL = 7 PPM

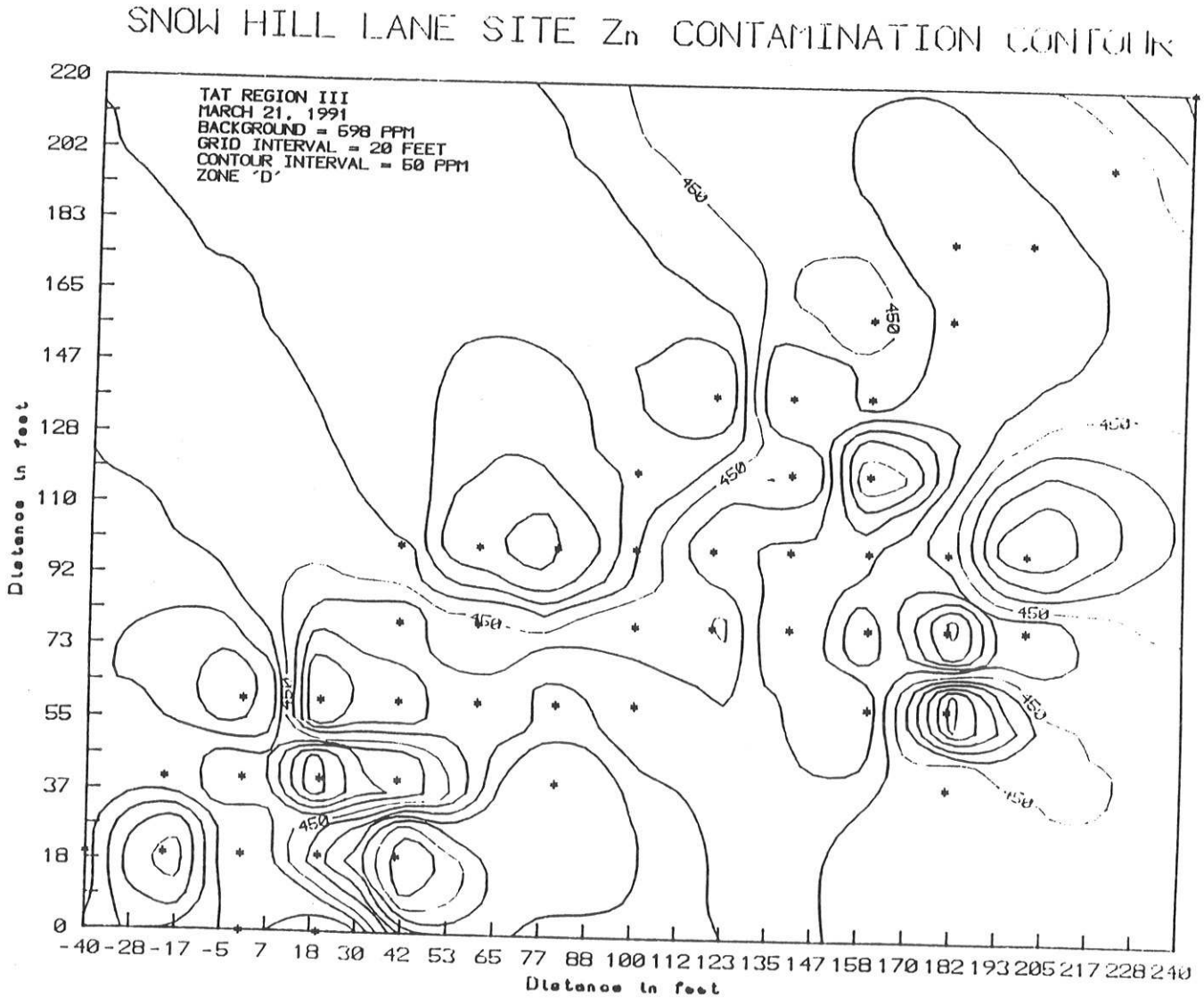

SNOW HILL LANE SITE Cr POST ASSESSMENT
CONCENTRATION IN PPM
802 810 818 826 834 843 851 859 867 875 884
DISTANCE IN FEET
220 193 165 138 110 83 55 28 0
DISTANCE IN FEET
-40 -17 7 30 53 77 100 123 147 170 193 217 240
Post assessment of Cr after remo
TAT Region III
Contour interval = 50 ppm
Zone 'D'
Background 784 ppm
May 14, 1991



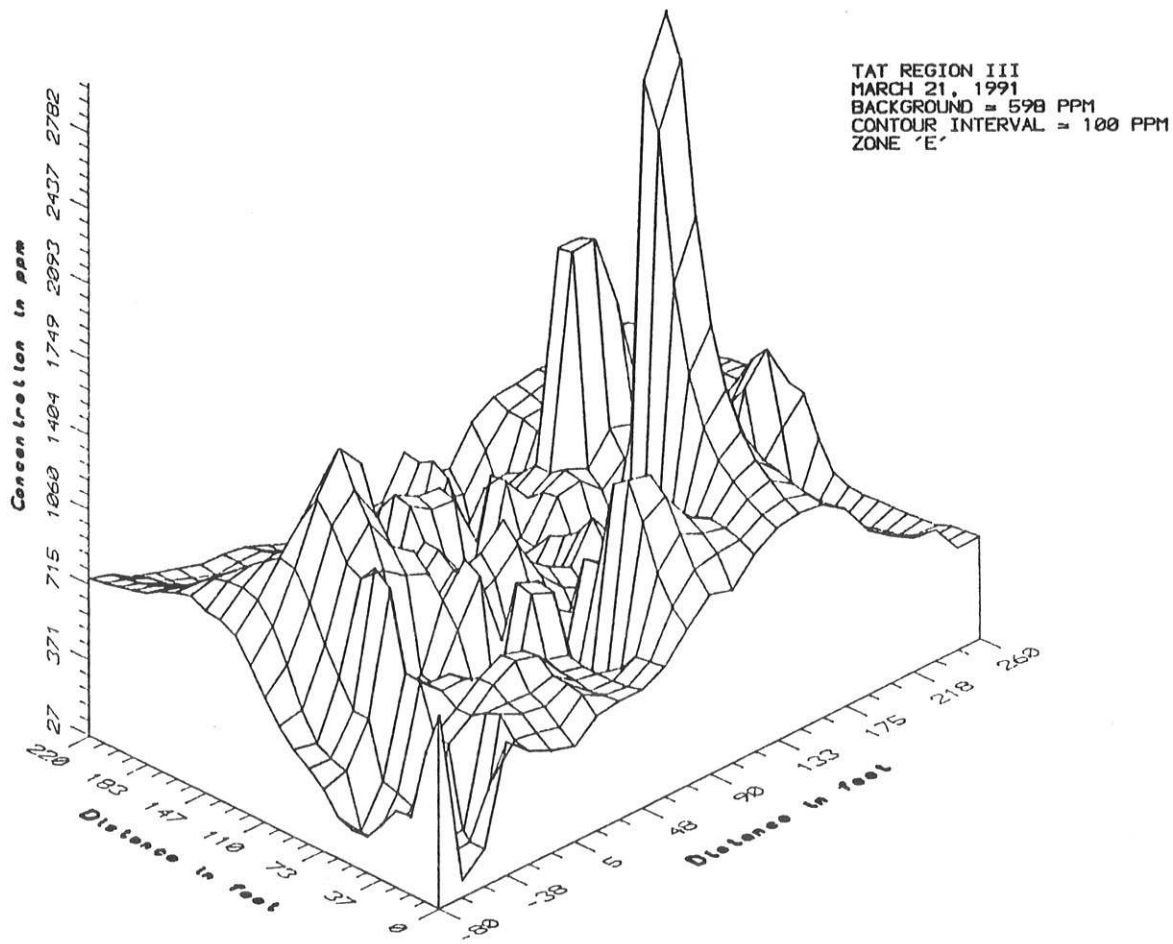


SNOW HILL LANE SITE Cr POST ASSESSMENT

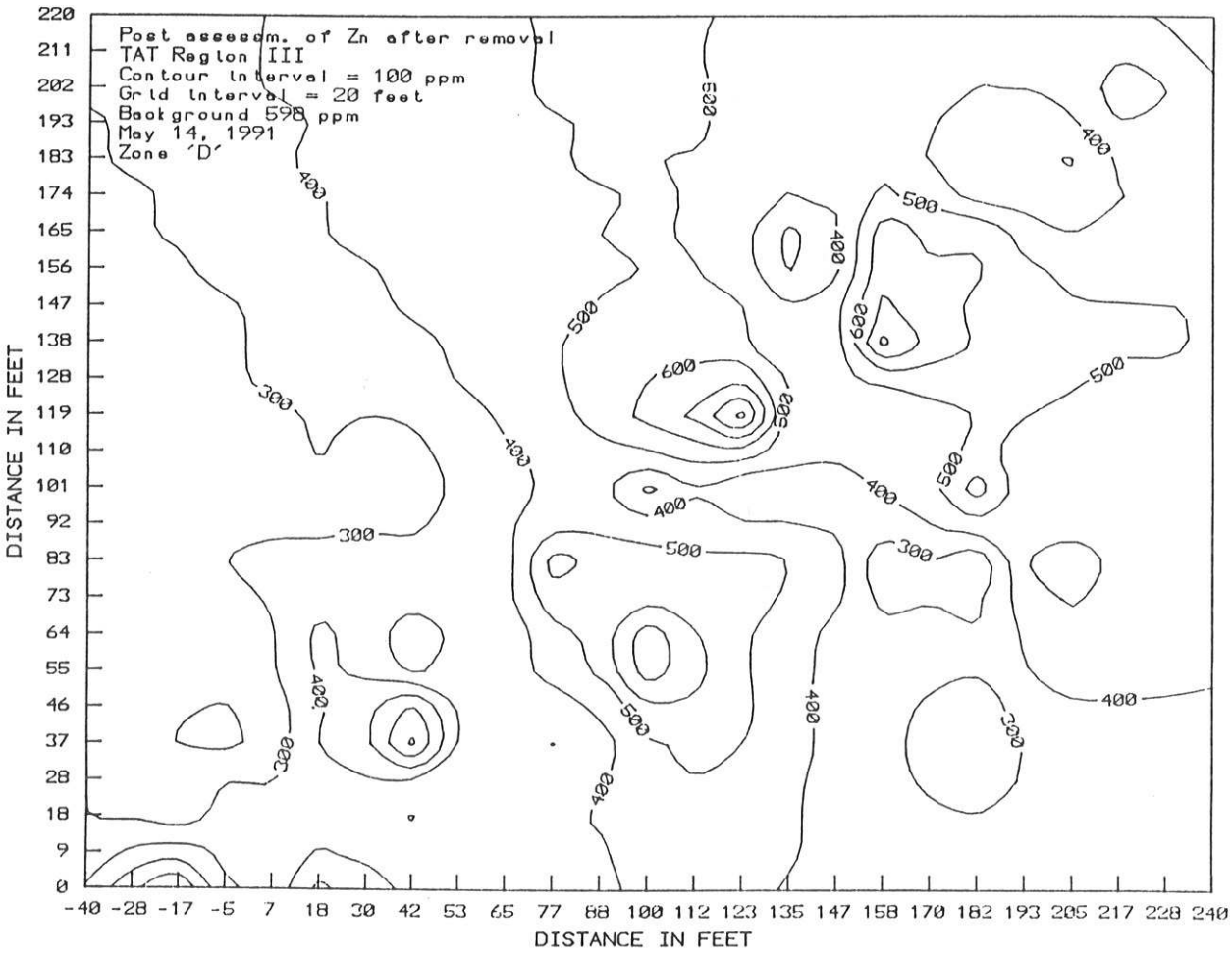


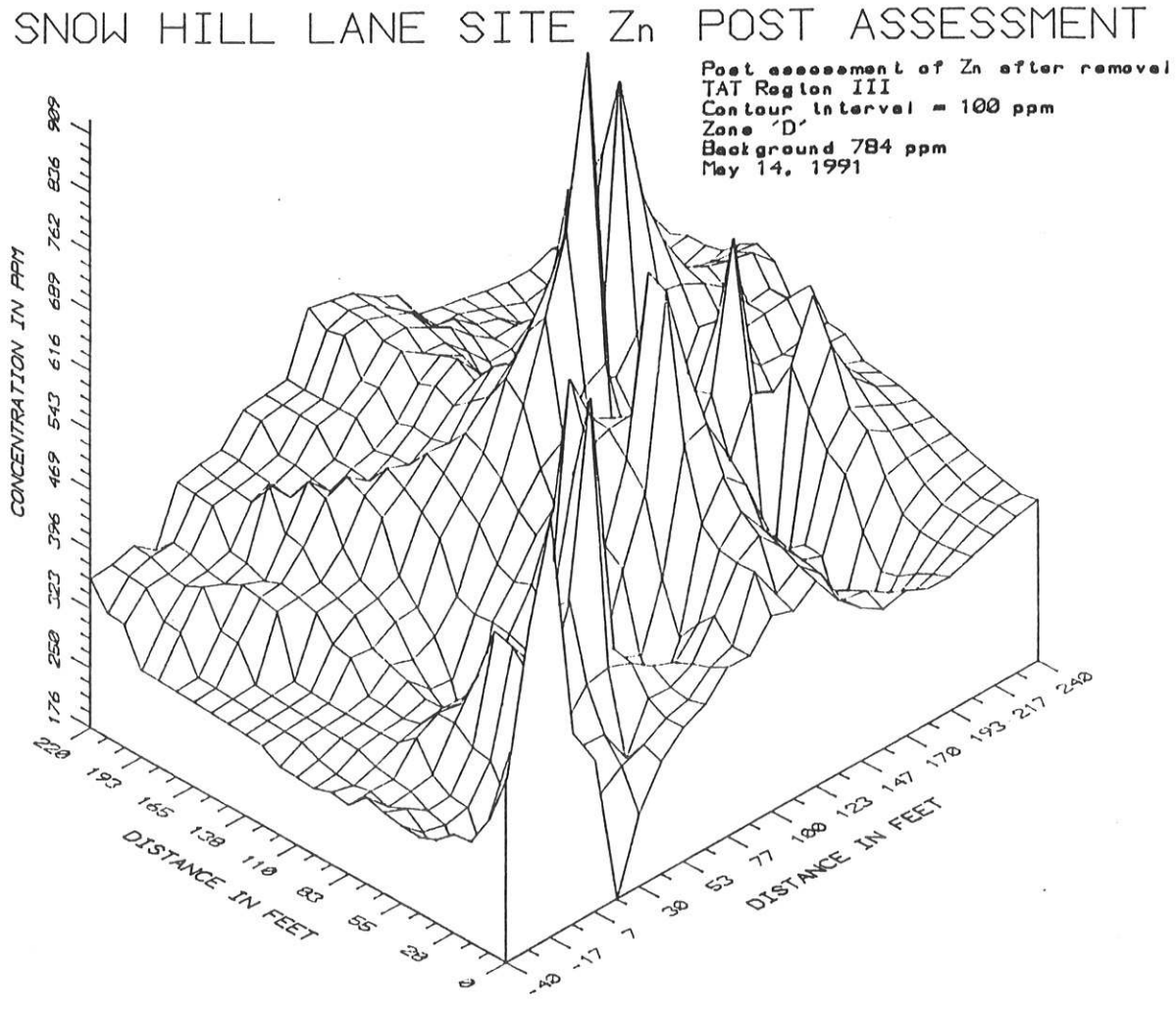


SNOW HILL LANE SITE Zn CONTAMINATION

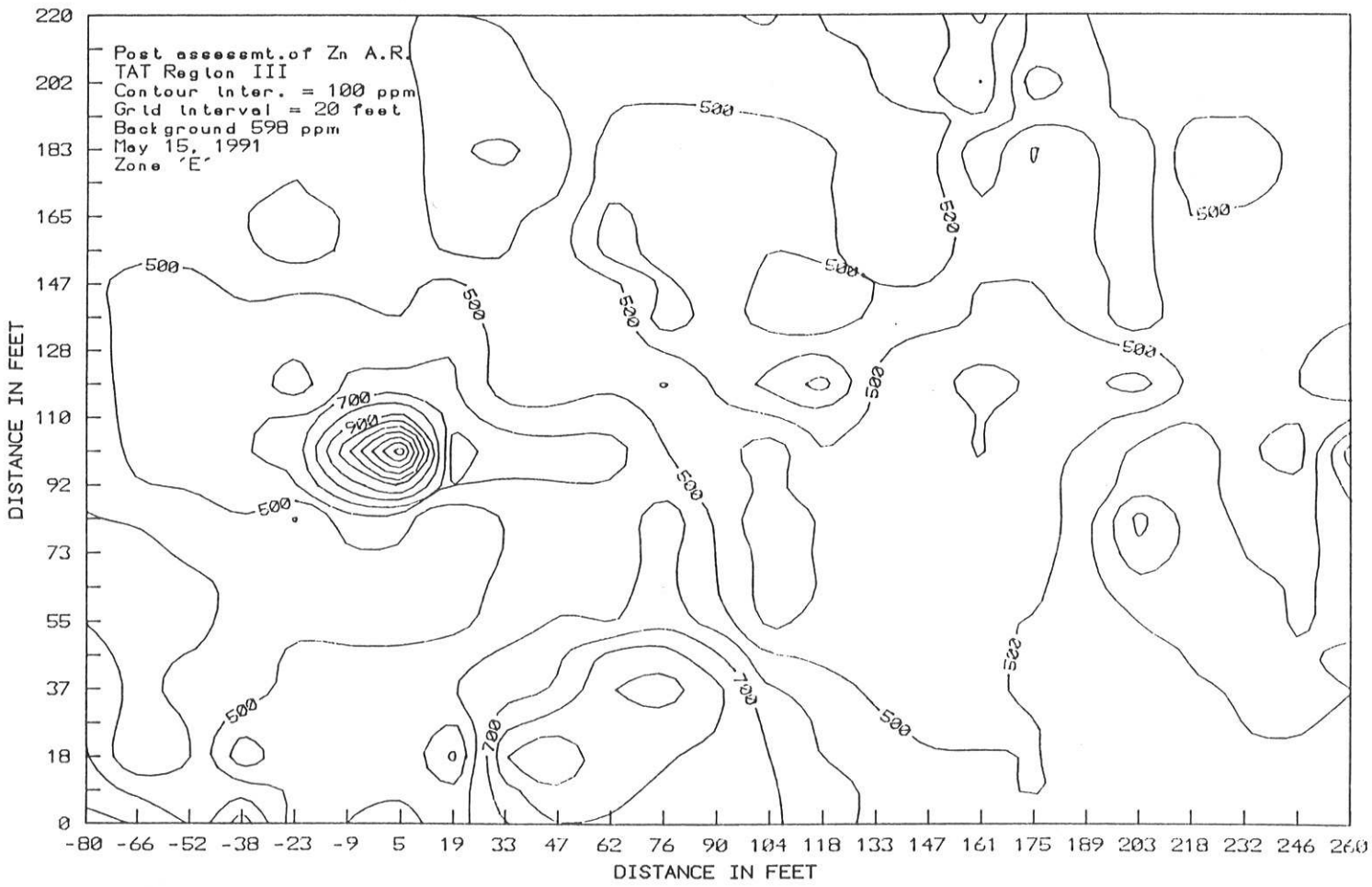


SNOW HILL LANE SITE Zn POST ASSESSMENT

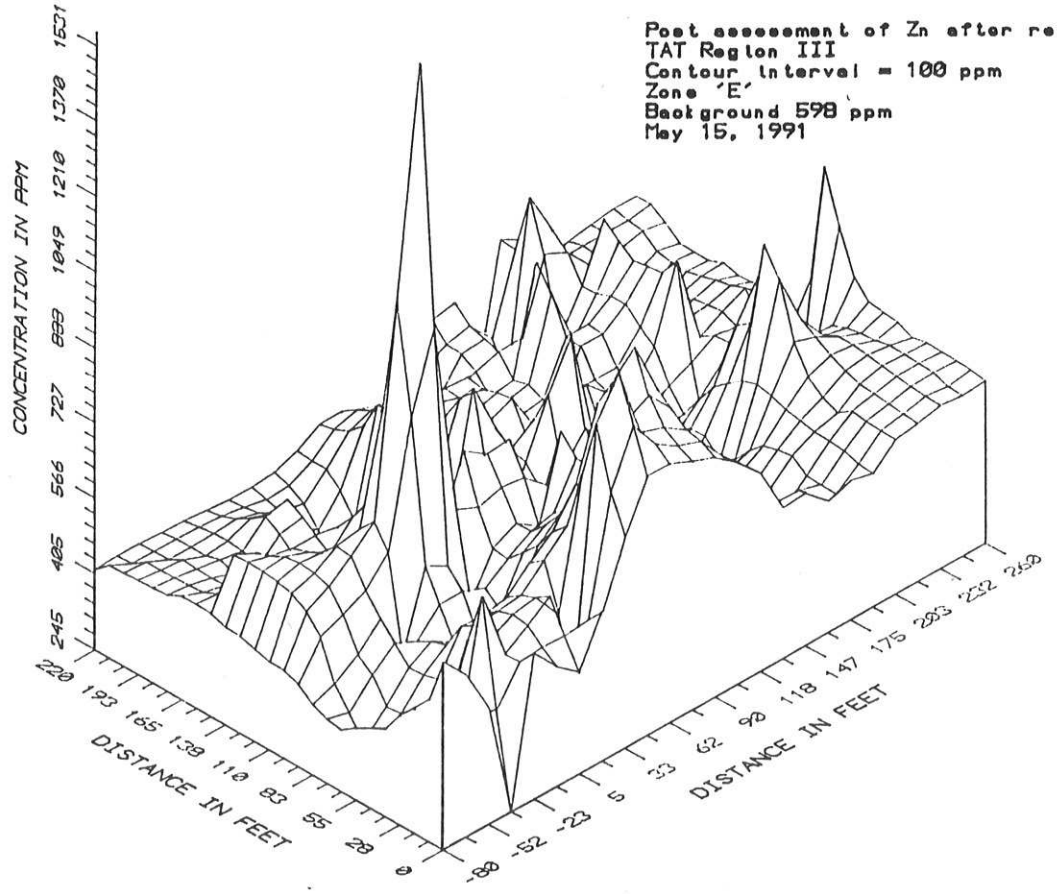



SNOW HILL LANE SITE Zn POST ASSESSMENT
Post assessment of Zn after removal
TAT Region III
Contour interval = 100 ppm
Zone 'D'
Background 784 ppm
May 14, 1991
CONCENTRATION IN PPM
176 250 323 396 469 543 616 689 762 836 909
DISTANCE IN FEET
220 193 165 138 110 83 55 28 0
DISTANCE IN FEET
-40 -17 7 30 53 77 100 123 147 170 193 217 240

SNOW HILL LANE SITE Zn POST ASSESSMENT

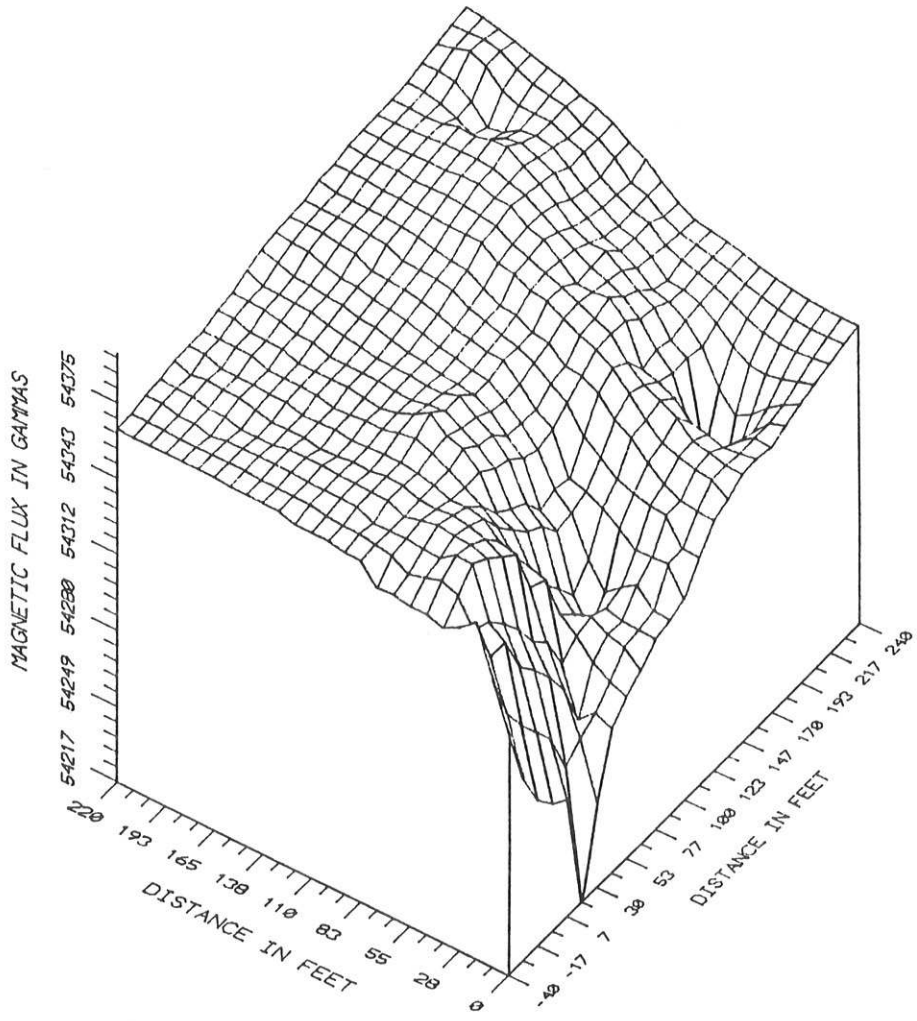


SNOW HILL LANE SITE Zn POST ASSESSMENT

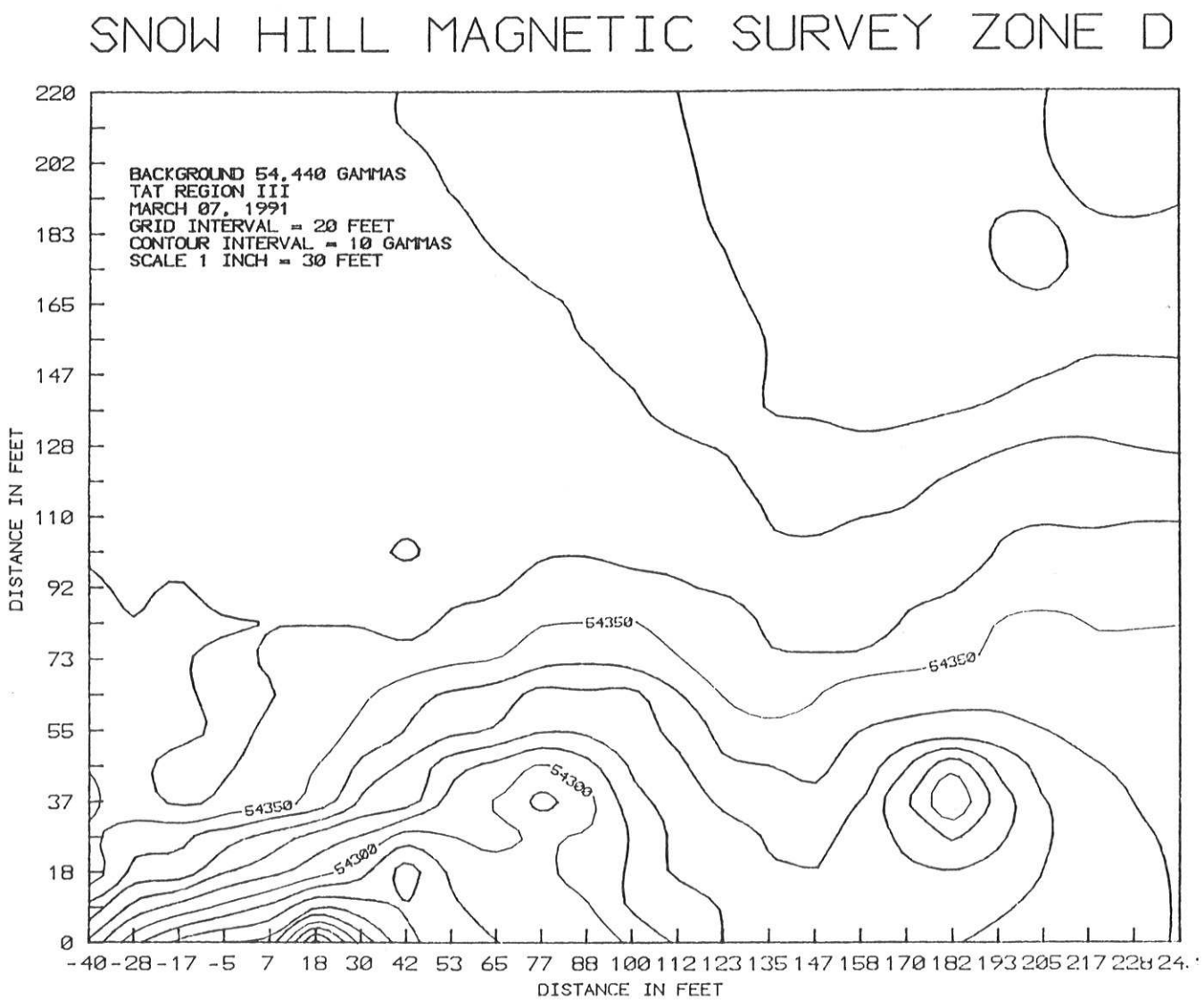


H. MAGNETIC SURVEY

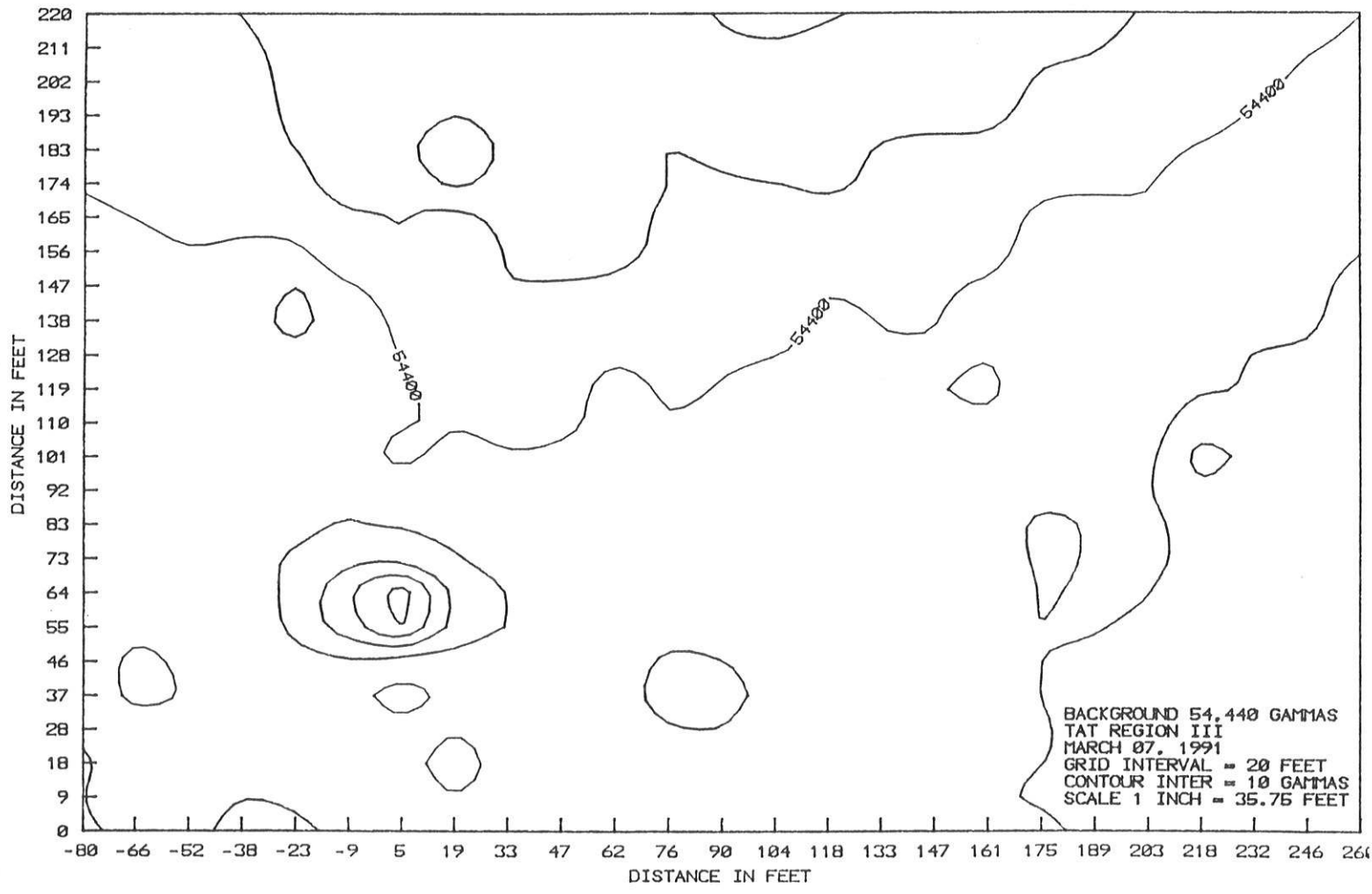
SNOW HILL MAGNETIC SURVEY ZONE D



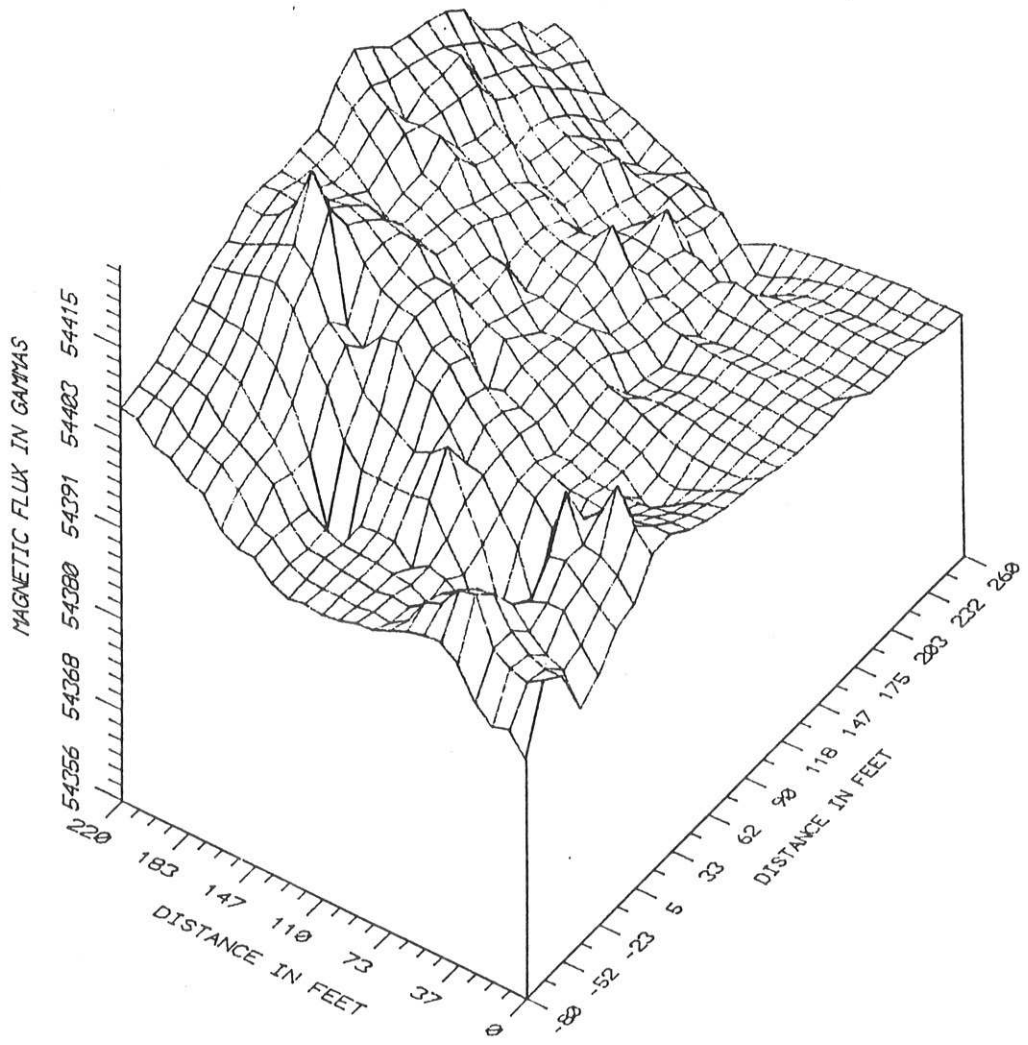
BACKGROUND 54,440 GAMMAS
TAT REGION III
MARCH 07, 1991
GRID INTERVAL = 20 FEET
CONTOUR INTERVAL = 10 GAMMAS


SNOW HILL MAGNETIC SURVEY ZONE D
BACKGROUND 54,440 GAMMAS
TAT REGION III
MARCH 07, 1991
GRID INTERVAL = 20 FEET
CONTOUR INTERVAL = 10 GAMMAS
SCALE 1 INCH = 30 FEET
54350
54350
54350
54300
54300
DISTANCE IN FEET
220
202
183
165
147
128
110
92
73
55
37
18
0
-40 -28 -17 -5 7 18 30 42 53 65 77 88 100 112 123 135 147 158 170 182 193 205 217 228 24.
DISTANCE IN FEET

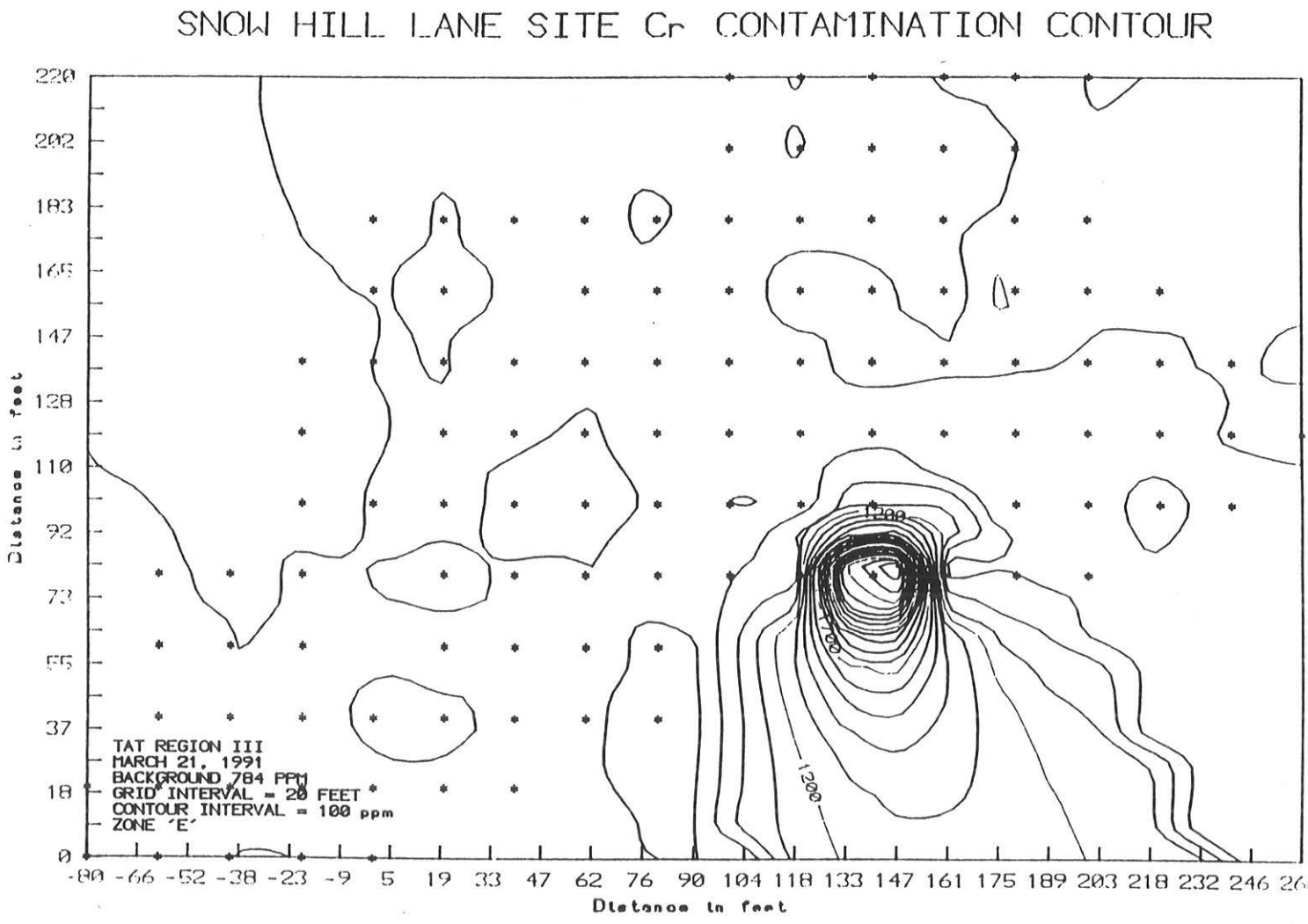
SNOW HILL MAGNETIC SURVEY ZONE E

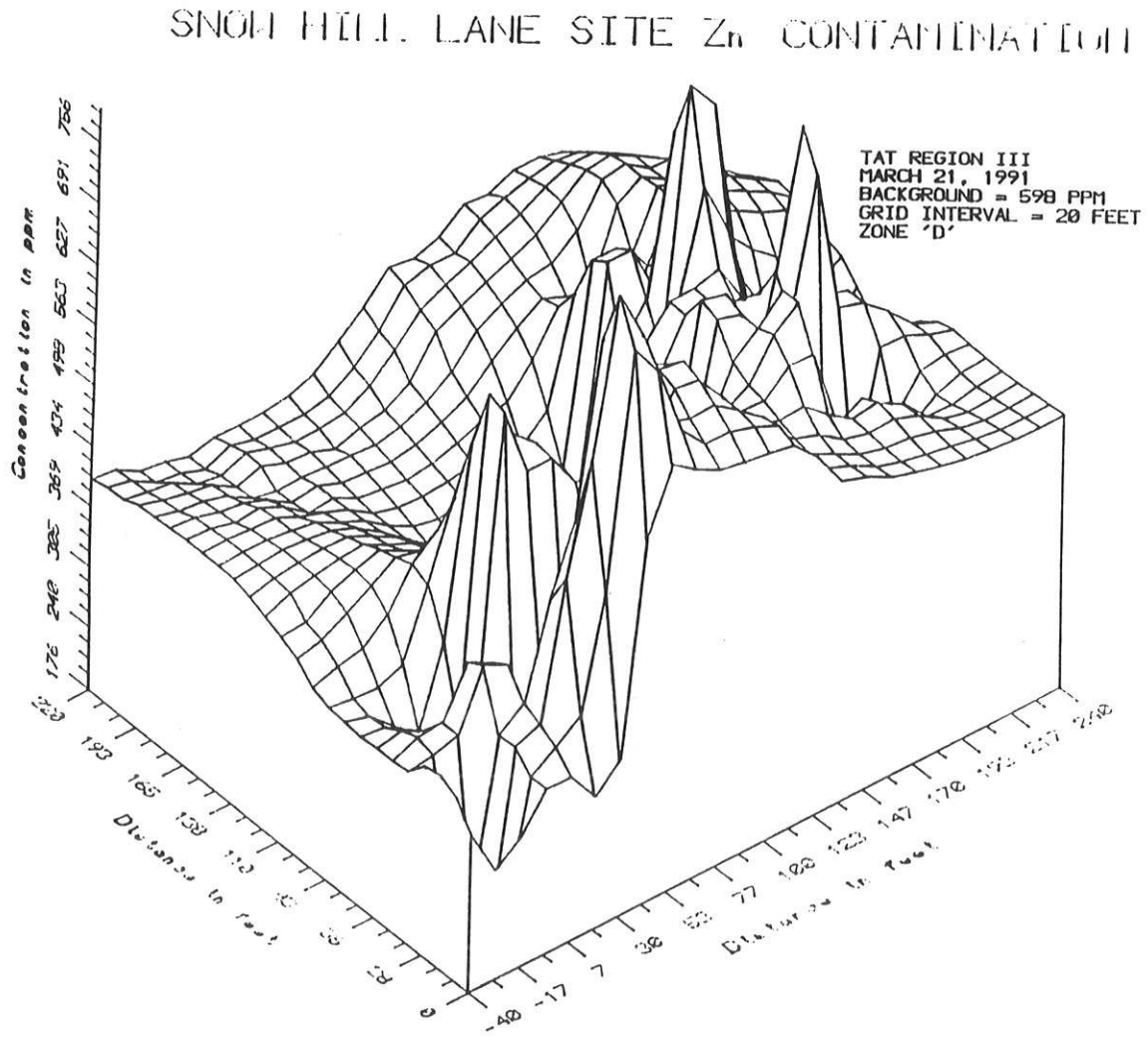


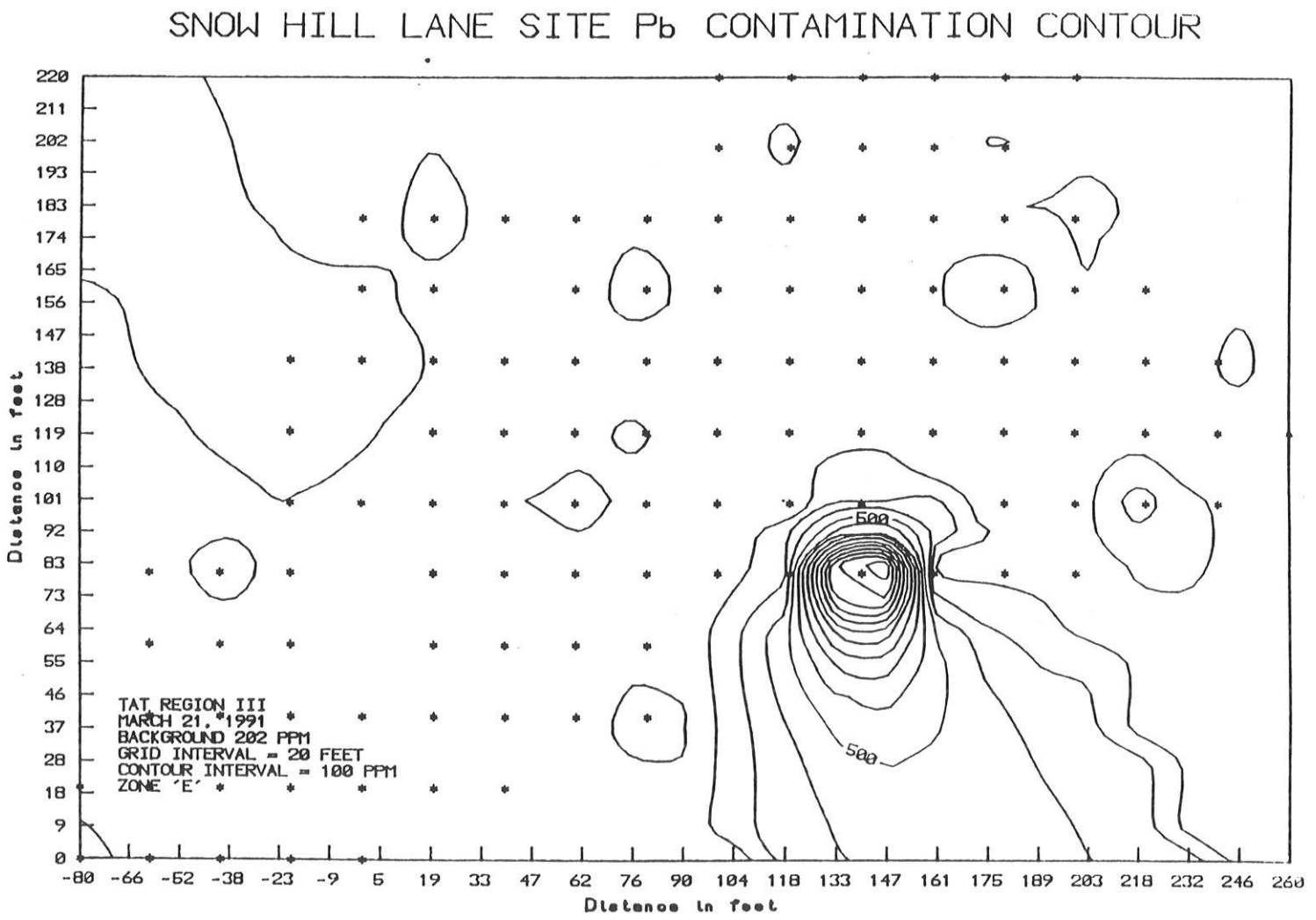
SNOW HILL MAGNETIC SURVEY ZONE E



BACKGROUND 54,440 GAMMAS
TAT REGION III
MARCH 07, 1991
GRID INTERVAL = 20 FEET
CONTOUR INTERVAL = 10 GAMMAS







SNOW HILL LANE SITE Zn CONTAMINATION CONTOUR